







R. Pettie

ELEMENTARY DRAWING

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BEING A FEW PRACTICAL HINTS

FOR ART STUDENTS AND TEACHERS

BY

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THIS BOOK IS DEDICATED

TO

Frank G. Jackson,

SECOND MASTER OF THE

BIRMINGHAM MUNICIPAL SCHOOL OF ART,

AS A SLIGHT RECOGNITION OF THE SYMPATHETIC HELP AND

ADVICE WHICH HAVE BEEN GIVEN TO THE AUTHOR

DURING MANY YEARS' FRIENDSHIP.

PARADISE STREET, BIRMINGHAM.

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INTRODUCTION.

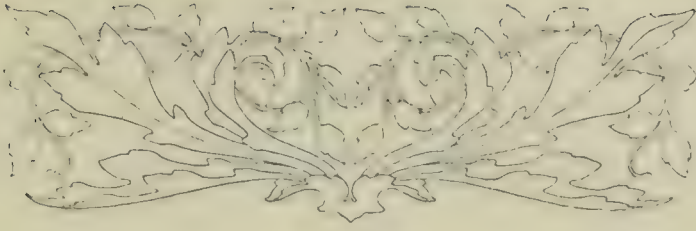
THERE are many art students who from various reasons are unable to attend a recognized school of art, and there are teachers, living remote from large towns, to whom any practical hints may be welcome. This book has been written with the hope that it may help those so situated, and the information contained herein has been gathered from experience in teaching the various subjects explained. It is a general idea, that the methods employed by schools of art are indirect and laborious ; in fact, are looked upon as a waste of time. Now, to any one who has given the matter serious thought, it must be evident that they are most direct and time-saving, because such methods are the result of bringing to bear common-sense principles. It

is useless to attempt running before one can walk, yet there are many people who imagine that a few lessons taken in a casual sort of way will give them the power of drawing. To these I have nothing to say ; but to those willing to take up the matter earnestly, I shall endeavour to make the subject as interesting and thorough as lies in my power. In these days of quick living, directness of effort and thought are all-important.

The most difficult students to deal with are those who have been badly taught, for in addition to teaching them, one has to unteach them. The untrained mind has always more or less of the parrot element about it—that is, it is prone to merely imitate. As a rule students are, if left to themselves, very apt to draw unthinkingly, to strike aimlessly, and the teacher will have done much when he has got his students to think before they act. The best aim of a student should be not to make a servile imitation, but an intelligent imitation, and to do this he must well consider

and get a knowledge of that which he tries to imitate, must make his brain help his eye and hand. There are many people capable of producing a copy of a thing which appears very good to the uneducated eye, but the method and reason for such drawing are wanting—it is not intelligent work. For instance, suppose two students of equal imitative power are set to draw a flower from Nature, the one having botanical knowledge and the other none; the best drawing must come from the one who knows all about what he is drawing, and remember also, to him it must be easier because of such knowledge. Any one who has been fortunate enough to see a Japanese artist at work will have noticed the direct way in which he works. Knowledge of his subject has given him the power of producing a sketch containing all the action, grace, and individuality of a certain bird or flower with a few unhesitating touches of the brush. Here the artist has noted the flight of the bird, the spread of its wing, and the set of its feathers—has, in fact,

visibly analyzed his subject; consequently he knows before beginning to work exactly what it is he wants to express, also exactly how to express it in the most direct manner. In the knowledge gained by a close observation of Nature, and by the endeavour to express it, lies the great pleasure and power of art; therefore it behoves one, even in the elementary stages of art education, to work intelligently. The eye unfortunately may be just as easily educated to see things falsely as truly, yet we have this consolation, that although to draw well is always an effort, however practised one may be, yet the drawing of a line correctly and directly will become in time almost a habit.



ELEMENTARY DRAWING.

CHAPTER I.

FREEHAND DRAWING.

DRAWING in line being the usual mode of expression used as a beginning, it will be well to consider the best way of drawing a line. I regret to say that the usual custom is to draw a line by any means but by a "free-hand," for the majority of students use the hand in a very stiff and cramped position. If all the joints of the arm as well as the hand are used, it will be possible to make a free line of any length or form

with comparative ease ; whereas, if the hand rests firmly upon the paper, its range of action is limited, and should a line be required which is beyond this range, the hand must be moved in position, and the line will thereby become disjointed. In a well-drawn line its value lies in its unity and swing, its directness of thought and expression. Lines should give evidence of sure thought, not of hesitation, and should never be drawn carelessly or falsely, with the idea that they may be ultimately mended and patched into good ones ; they should be carefully studied, and when their forms are impressed upon the mind, and not until then, they should be attempted boldly. This is the secret of good imitation, for, after all, the copying of a line is merely a short exercise of memory. The student concentrates his mind and eye upon the original, gets to know it, and then endeavours

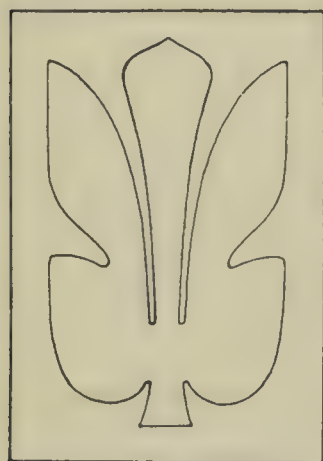
to produce from memory what he has just before seen. How then can success be expected without due consideration of the original line? and yet how often it is attempted upon the strength of a very superficial glance.

Before commencing work, the subject of materials is one well worth considering. Never use a hard pencil. It will make a thin hard line, and will indent the paper so much that the line can never be removed. A good quality H.B. will give as fine a line as the student will ever need. Beware of papers which have a shiny surface, for such surfaces, besides being harmful to the eyes, will become woolly from the use of india-rubber. A paper with a slightly grained surface, the texture of which may be felt with the pencil point, is the pleasantest to work upon. The indiarubber should be soft in order that it may remove the lead from

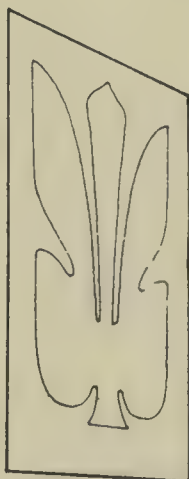
the paper and not distribute it, and may leave the surface of the paper undamaged.

A matter which is often overlooked by the teacher is the comfort of the student. By comfortable conditions we shall obtain the best work, and in addition to good light, fresh air, sufficient room, and well-chosen examples, each student should have the best possible view of the object he has to copy. Whenever possible the student should work by a light which comes to him from the left, when he will not be bothered by the shadow of his hand. In the case of small copies, let them be placed directly over the centre of the top edge of the drawing-board, not at the side of the drawing-board, and see that the student does not work from the corner of the board, but sits square with it. The board should slope at such an angle that its four corners are equidistant from the eye, otherwise the

student will be working upon an inclined surface and not a parallel one. When drawing from large diagrams or from the black board, each student should have a full view of the example, and not a foreshortened view.



POSITION IN WHICH COPY
SHOULD BE SEEN : I E
PARALLEL TO STUDENT



A FORE-SHORTENED
OR OBLIQUE VIEW
THE TRUE SHAPE OF
COPY BEING LOST.

FIG. 1.

Two illustrations of this are given in Fig. 1. In the "full view," to the left, the copy is seen in its actual shape, that is to say, its parts are of the actual proportions one with the other ; while to the right

is given the “foreshortened view,” in which the one edge of the diagram appears longer than the other, and the leaf farther away appears smaller than the nearer one, and therefore is not seen in its true shape. This can be avoided by placing the students in front of the example, and not at the side of it.

Any good example which the student has to copy will owe its beauty to its proportions, and the principles upon which it is constructed; and it follows, that if we appreciate this construction, and think out these proportions, go about our work in a workmanlike manner, we may expect good results. That which is true is beautiful, and to be true our work must be like Nature's—constructive. All the beauty of Nature is the outcome of construction. She never makes imperfect construction, and never elaborates a mistake. You may

ornament a piece of furniture, but unless its construction is right, it will never be beautiful. You may paint all the play of light and shade upon a leaf, but you must attach the leaf properly to its stem, or it will be useless work.

The more intricate or full of detail a copy may be, the more construction will it contain, therefore the more constructive should be the method used in drawing it. By this means we shall build up our copy upon the same lines upon which it was designed. The different forms which it contains are bound together by a series of main lines, which maintain its entirety, and prevent it being disjointed or bitty. By well considering the example we have to copy from an analytical point of view, we may get to know all about it before setting to work, and may thereby save time, and lessen the chances of mistakes. Copies

should always be drawn larger or smaller
than the example, because this necessitates

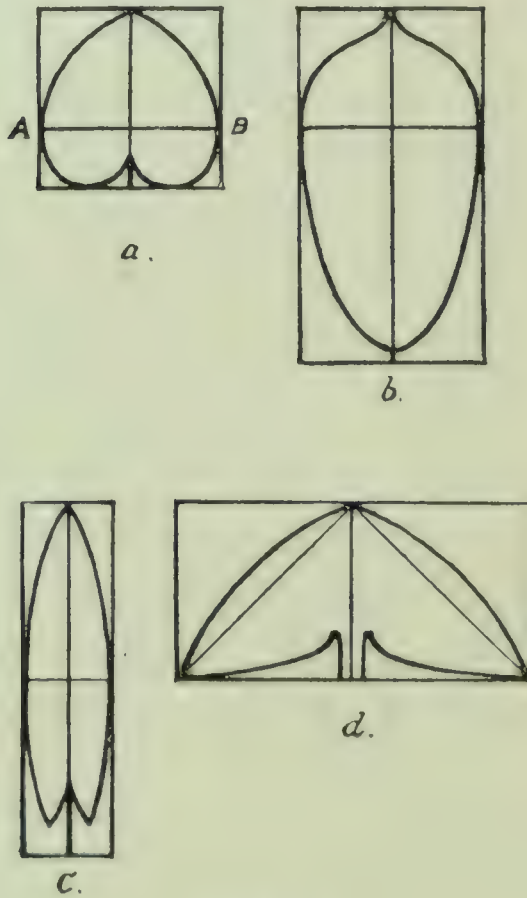


FIG. 2.

a careful attention to the proportions, which
I find it best to divide into two kinds—

the GENERAL PROPORTIONS, and the PROPORTIONS OF PARTS. To explain the first Fig. 2 is given.

Here we have four leaf-like forms, each with its individuality of form and proportion. Any form will be found to be somewhere broadest and somewhere longest, and these are the general proportions. In sketch A we have a leaf-form which is as broad as it is deep ; in other words, is contained in a square. Its greatest width will be found upon the line A B, which line is one-third the distance up the centre line. By first drawing a vertical centre line, and upon this constructing the square, and finding the greatest width proportionately, we can as easily increase or decrease the size of our drawing as we could make it the same size as the original. The square is of very great use in getting the curved lines which form the leaf like-sided, because

we can consider the curved line in relation to the angles and lines of the square, in addition to their relation to the vertical centre line. In sketch B we have the width equal to half the length; that is to say, the rectangle in which we should draw the leaf is equal to two squares, the proportion of width to length being as 1 is to 2. The widest part of the leaf will in this case be a third of the distance down the centre line. Now apply this consideration to c and d, and it will give just as useful information. These examples are very simple, purposely so, that they may not lead the student into confounding GENERAL PROPORTIONS with PROPORTIONS OF PARTS.

To explain the PROPORTIONS OF PARTS, it is necessary to take a more advanced example, and one has been purposely chosen which is contained in a rectangle, that it may be continuous with the foregoing examples.

If reference is made to Fig. 3, No. 1,

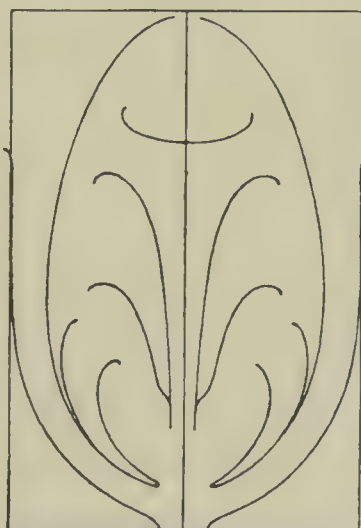
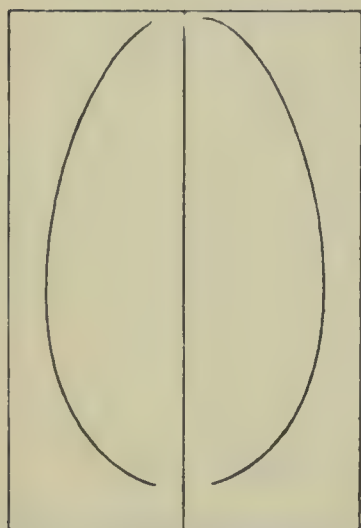
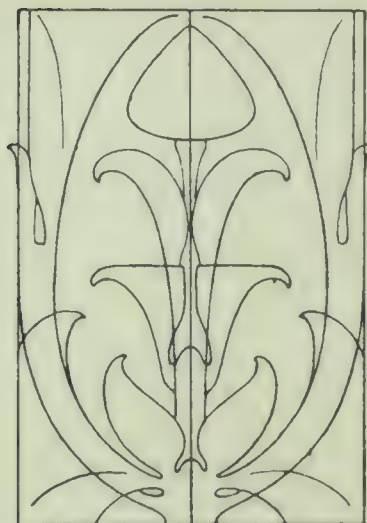


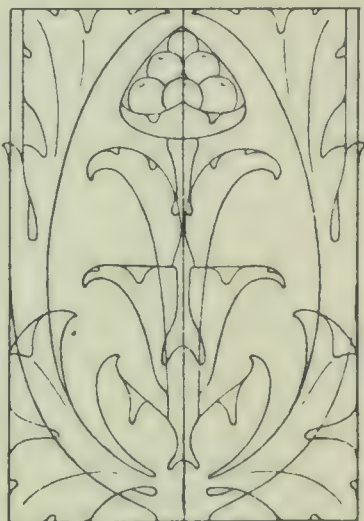
FIG. 3.

each form thereof is in a certain position,

and of a relative size to the other forms.



N°4- BLOCKING-IN.



N°5- FILLING-IN OF DETAILS.



N°6- A COPY WHICH IS NOT
LINE-SIZED

FIG. 3.

Of the lines expressing each form, one will

be found of greater length and of simpler shape than the others, and this line will give the pose, and express in the simplest manner the form to which it belongs. In No. 2 the general proportions are given. In No. 3 each form has been expressed by means of these simple lines, and shows the copy advanced to the stage of PROPORTIONS OF PARTS. When this stage is correctly finished, the greatest difficulty of the drawing is over, for we have put everything in its proper place in the simplest possible manner.

In No. 4 each form has been reduced to its general bulk, as it is termed, "blocked in." All the serrations or divisions of the leaves have been ignored in order that the separate forms may be given their general area, in a simple manner, and it should be noted, that the two important veins or ribs have been added. Following out

the method used above, of reducing forms to their simplest lines, it is always necessary, in drawing leaf forms, to first draw the mid-rib, as this gives the pose and size to the leaf. When this stage of "blocking in" has been completed, there are two things to notice—first, that in addition to each part being in its right place, its general form has been expressed; second, that the main lines, expressing the "PROPORTIONS OF PARTS," give the construction lines which form the scheme upon which the copy is built.

Attention is particularly called to the way in which some of the lines in No. 3 have been carried out or completed, as suggested by as much of them as is visible in the completed copy. This is done for constructive reasons, for it is often necessary to draw lines which are only suggested, in order that from them we may the

more readily draw lines which actually exist. Every line in this copy has some harmonious relation to other lines, and this carrying out of lines, although only parts of them may be needed, preserves their suggested continuity.

The filling in of DETAILS, or the true finishing of the copy, is shown in No. 5, and coming upon the top of good construction, should be easy. All attention can now be expended upon rendering these details, without being worried by having to acknowledge and alter mistakes of proportion. The points to notice in adding these details, are the relative depths of the divisions of leaves, one with another, and the distances between the points of the leaves.

It is here necessary to draw attention to the principle of radiation, for the appreciation of the different kinds of radiation

is indispensable for the rendering of most ornamental and natural forms. The different forms are given in Fig. 4, with their application to some decorative forms.

EXAMPLES OF RADIATION APPLIED TO ORNAMENT.



FIG. 4.

In No. 1 (Fig. 3) the forms it contains spring from the base of the centre line, and are divided into three groups—a central group, with one on either side, as expressed by the three lines in No. 2. The lines in

each group radiate harmoniously and become united at the base.

Portions of the finished copy are drawn in Fig. 5 upon a larger scale, in order to



FIG. 5.

show how the principle of radiation is discernible even in the details.

A word as to lining in. This is often attempted without reference to the original,
c

and should never be so attempted. It should really be a re-drawing of the copy after cleaning away all superfluous lines. Never use a hard pencil, as has been before stated, and do not attempt a greater length of line than the hand can comfortably draw. The greater freedom used in making a line, the better the line will be, and the more of the arm that is brought into play in making a line the better. Students should remember that, as a rule, forms in drawing copies are larger than forms in writing, and should be executed in a larger way.

Fig. 3, No. 6, is an example of a freehand copy which is not symmetric, and therefore one in which a vertical centre line would be useless. Yet it has a centre line, on which the pose of the whole depends, and is marked in the guide sketch A B. Let this copy be attempted by the same method as explained, and the student will see for

himself that it is an intelligent one. Before beginning, note that there is no rectangle surrounding the copy ; but still there is a definite form suggested by the dotted lines passing through certain important points. Many of the suggestions given will need thinking over and applying several times before the student either grasps them or sees their importance ; but I feel certain that they will, if understood, tend to make the efforts of students more direct.

Drawing from memory is of very great help if practised judiciously, and copies which are very simple should be used at first. A copy should be looked at for about five minutes, the object being to store up a mental image of it by ascertaining its general proportions, etc. The copy should then be put out of sight, and an attempt made to draw a recollection of it. The success will mostly depend upon what use, mentally, has been made of the five minutes.

It may be of help to give a short summary of the method advised for copying an example.

General Proportions.—1st. Ascertain the general proportions of the original and express them.

Proportions of Parts.—2nd. Express each form by its simplest line.

Blocking in.—3rd. Express the general area of each form.

Details.—4th. Add the divisions of leaves and other details.

As head and tail-pieces to this chapter I have designed two drawing copies, the former to be attempted as an ordinary study, and the latter to be drawn from memory.



CHAPTER II.

MODEL DRAWING, OR DRAWING FROM THE ROUND.

THE reason why drawing from objects is more difficult than drawing from flat copies is, that we have to copy foreshortened surfaces, and not surfaces presented to us in their actual or true shapes. The beginner will find difficulty in seeing and realizing surfaces as they appear, and will often be led away by drawing what he knows to be the shape of a surface, instead of drawing what he sees of it.

We express an object by means of lines which represent its edges, and we will consider lines as applied to model drawing.

A straight line has three conditions—its straightness, its direction, and its length. It may be presented to us in such a position that although its straightness will always be maintained, its direction and length may be apparently altered. We may see it, in fact, different to what we know it to be. Again, a curved line has three conditions—its shape or curve, its direction, and its length. This may be seen from such a position that its curve, direction, and length all seem different. It follows then that straight lines are the easiest to draw and realize, so that these will be the first explained. The more difficult a line is to copy, the more reason there will be for reducing it, if possible, to a simpler form. Hence, as we have three facts to fix with regard to a line, viz. form, direction, and length, it is better to take them as separate items. By first drawing a line of an indefinite length, but in a

correct direction, we can afterwards do away with the superfluous quantity, thereby making the length an after consideration.

The positions in which we may see a line are three—either horizontal, vertical, or oblique. The two first are definite quantities, while the third is an indefinite quantity, as we may have lines of any obliqueness. When a line is actually vertical it will always seem vertical to us, and should be drawn so. When a line is actually horizontal or oblique, we shall have to determine how we see it before we can draw it. We must not allow the eye to be prevented from determining exactly how it does see a line, by any knowledge of how that line really is. This argument holds good with regard to surfaces, and to make this understood, let the student take a square piece of cardboard, and by nicking it midway across, it may be doubled so as

to present two flat surfaces at right angles with each other. Let this be placed upon a shelf, so that the one side shall rest upon the shelf and the other against the wall.

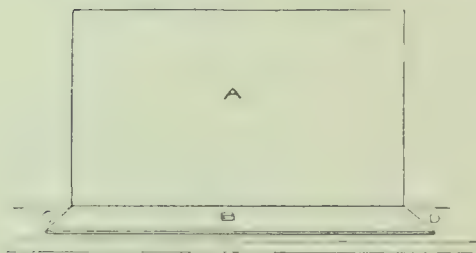


FIG. 6.

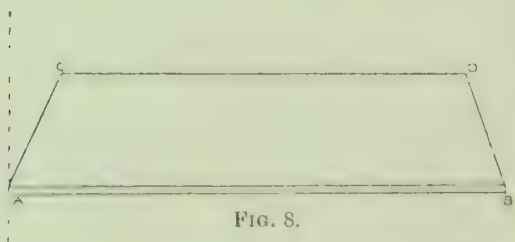
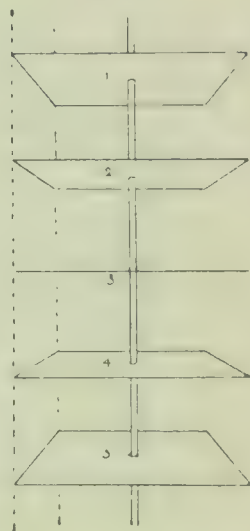


FIG. 8.

FIG. 7.



If the shelf is about four feet from the ground, the view he will get of it will be about like Fig. 6. The surface marked A is of the same size and shape as the surface marked B. This is a matter of knowledge ; but, as a matter of appearance, the two surfaces present entirely different impres-

sions upon the eye, the one being visible in its true shape, and the other in its foreshortened shape. In the surface A we see the rectangles at each corner, while in B each rectangle has become foreshortened. The top and bottom lines of A we see of equal length, while the front line of B is considerably longer, naturally, being nearer to the eye. This lengthening of the nearer line has necessitated making the side lines c and d oblique, thereby destroying the right angles of the corners. In the case of surface A we see its actual width and actual depth, but in B the depth has become contracted.

By placing the cardboard upon a lower shelf more of the surface B would come into view. So far, the foreshortening of a horizontal surface has been dealt with, and if the student will place the card upon its rectangular end, the foreshortening of

vertical or upright surfaces may be considered. In model drawing, the student should sit parallel with the object he has to draw. This is best managed when teaching a class by arranging the students in a circle with the group of models in the centre, each drawing-board being so placed that if a line be drawn up its centre and continued, it would lead directly to the group. The edge of the board may then often be used as a means of getting the inclinations of lines.

Another advantage of sitting with the board parallel to the object is, that instead of turning the head it is only necessary to raise it, in order to get a good view.

If the student will cut out five equal-sized squares of thin cardboard, and thread them at equal distances upon a piece of wire, so that they are square with each other, by placing the centre one level with the eye

they will appear as in Fig. 7. Nos. 1 and 2 are above the eye, therefore we see the under surfaces of the squares, with the oblique sides converging downwards. No. 3 is on a level with the eye, hence we only see its edge. Nos. 4 and 5 are below the eye, and we see the upper surfaces of the squares, with the oblique sides converging upwards. Nos. 2 and 4, being nearer the level of the eye, do not appear so deep from front to back as Nos. 1 and 5. From this we learn, that the farther a horizontal surface is from the level of the eye, the nearer to its true or geometric shape it will appear.

The first attempt in model drawing should be the expression of a flat surface, and a drawing-board should be placed upon a stool about two feet from the ground, and in such a position that its long edges are parallel with the student, as in Fig. 8. By comparing this with surface B, Fig. 6, it will be

found deeper from front to back, in comparison with its width. This is because it is further below the level of the eye than the surface B.

In Fig. 9 a sketch has been made of a drawing-board so placed that one corner is nearest to the student. In Fig. 8 we have two lines parallel to us and two oblique, while in Fig. 9 all the lines are oblique. Below the board in Fig. 9 is a sketch of part of a lead pencil. This pencil is supposed to be held horizontally and at arm's length by the student, and so placed that its top edge appears to come in contact with the corner A of board. By this means a horizontal line (the edge of pencil) has been supplied, from which the obliqueness of lines A B and A D can be determined. A horizontal line drawn upon the paper, as dotted line x x in Fig. 10, will therefore be equivalent to the edge of pencil held up between the eye and

the corner A of board. In this line make a point A, and from this draw the two lines A D and A B (Fig. 10). It has been shown that a line has two ends and direction. It should be noticed that we have not yet fixed the lengths of A D and A B, but have decided the directions of them. If the student will now hold the pencil so that it seems to fit up against the oblique right-hand line of board, and by placing the end of the pencil at the nearest corner A, and his thumb upon the pencil at that point which appears to touch corner D, he will have the *apparent* length of A D gauged upon the pencil. By a slight turn of the wrist he can then compare the apparent length of A D with that of A B, and can then make line A B upon his drawing of like proportion to A D. The student must, however, upon no account use such a measurement as an actual one, but merely as a means

of getting the relative proportion of one length with another. By holding the pencil in an upright position, as shown by dotted line in Fig. 8, the correct slope of A C can



FIG. 9.

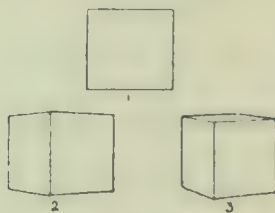


FIG. 11.



FIG. 10.

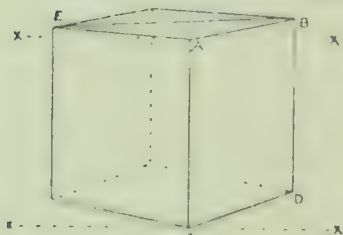


FIG. 12.

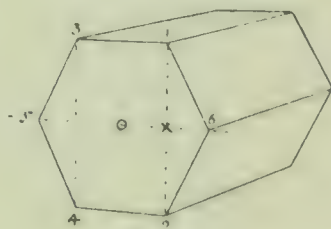


FIG. 13.

be judged, and by gauging upon his pencil the depth it appears to be between lines C D and A B (Fig. 8), he can by comparison with the width A B get the proportionate distance between lines C D and A B. A

rectangle expressed by dotted lines has been placed about the Fig.10, and from these lines the oblique lines may be easily obtained.

The best objects for the student to first attempt are the simpler geometric solids and vase forms. The geometric solids are divided into two classes: those composed wholly of surfaces having straight edges, such as the cube, square, and hexagonal pyramids, hexagonal and square prisms; and those having surfaces with curved edges, as the cylinder, cone, and pierced slab. It would be well if the student could place each solid in the positions here shown, that the explanations may be followed out.

At present attention has only been drawn to the foreshortening of a single surface, but in solids we shall generally have to consider the apparent shape, size, and position of one surface in relation to others. In the cube we shall see either one, two, or

at the most three of its surfaces, as shown by the examples in Fig. 11. A drawing of a cube will be found in Fig. 12. It has been pointed out that, the lower a horizontal surface is below the level of the eye, the nearer its true shape will it appear, and an instance of this will be found in the upper and lower surfaces of cube. The two dotted horizontal lines, x x, are equivalent to the edge of the pencil, and from these two lines it will be noticed how much more the lower oblique lines ascend than the upper, thereby enabling us to express two facts: the first, that the lower surface appears deeper from front to back than the upper, and that the nearest upright edge of the cube is the longest. A diagonal has been drawn from corner to corner of the upper surface of cube from B to E, that it may be shown that the half farthest away looks smaller than the nearest half.

Fig. 13 represents an hexagonal prism. Let the student first draw a vertical line, and in it mark 1 and 2. By testing from the object with the pencil, the obliqueness of the lines 1, 3 and 2, 4, he can, in his drawing, run them at a similar obliqueness from points 1 and 2. If the length of line 1, 3 be considered with the length of line 1, 2, it will appear to be about half, and the line 1, 3 can be made to correspond in the drawing. As point 3 is directly over point 4, it is only necessary to draw the vertical line 3, 4. Midway between lines 1, 3 and 2, 4 draw a line indefinitely, in which points 5 and 6 may be found. However much an hexagonal face may be foreshortened to the view, the following rule will hold, that, having found the centre 0, the distance from this centre to where it cuts the line 1, 2 in point x will be equal to the distance x 6. It must be remem-

bered, however, that objects of similar size—as, for instance, the four portions into which line 5, 6 has been divided—will decrease the farther they are from the eye; hence the half 0, 5 will appear, and should be drawn a little shorter than 0, 6. The long lines of the hexagon may be judged from the pencil's edge. Notice that the lowest one ascends more swiftly than the highest.

When the foreshortening of a circular surface or form is understood, there should be no great difficulty in drawing the cylinder or cone. Exactly the same principles of foreshortening would be noticed if in Fig. 7 circular cards took the place of squares. In any other position but when perfectly parallel, or at right angles to the eye, a circle must appear more or less elliptical in form. If a coin is placed between the thumb and finger, and made to revolve horizontally, it will be noticed

that the foreshortening takes place in the apparent depth of the ellipse, as in the depth of the square. An ellipse has a major and minor axis, the former being the longest central straight line it will contain and the latter the shortest, and consequently these two lines or axes will cut across each other at right angles. To draw the ellipse formed by the appearance of a foreshortened circle, it is therefore necessary to draw the two axes of indefinite lengths, crossing each other at right angles, and upon the major axis find the extreme length, and upon the minor axis the extreme depth of the ellipse, the curved lines being drawn about them. In addition to the axes of surfaces there is the axis of the whole solid. This is the line which would run right through the solid, and upon which it would revolve, and is marked by the dotted vertical centre line in Figs. 14 and 15. To draw the cylinder,

first draw a centre line, and upon it mark off the apparent length of axis. Having obtained the proportionate width of cylinder by comparison with its depth, put in two upright lines representing the two sides. At right angles to and at the end of axis of cylinder, draw two lines, which will be the major axes of the two elliptical ends. Measure or consider the depth that it seems to be from front to back of the top and bottom ellipses, and make the drawing accordingly. The same may be done with the cone in Fig. 15. The student may think it superfluous work to draw the complete ellipse, as in the bases of cylinder and cone, because only the near edge is visible ; but experience will teach him that, as it is best in freehand to complete construction lines which are only suggested, the same argument holds in the case of model drawing. A good example of this will be found

in Fig. 17, where it is impossible to make the drawing correct without completing all the ellipses, particularly in the case of that one expressing the lower inside circle, of which only part is visible. Attention is



FIG. 14.

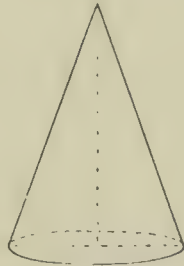


FIG. 15.

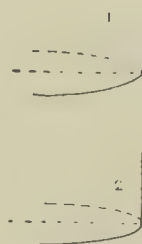


FIG. 16.

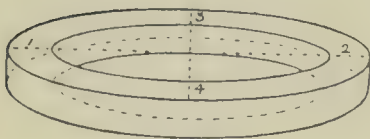


FIG. 17.

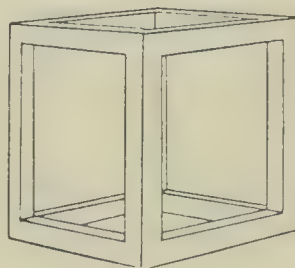


FIG. 18.

called to Fig. 16. In drawing the two ends of an ellipse, the mistake is often made by drawing it as a pointed form (No. 1), whereas it should look round, as in No. 2. In Fig. 17 there are two ellipses, which

express the two circles forming the top surface of the solid. These two ellipses are both on the same level, and, although one is smaller than the other, they are both of exactly the same proportions. The spaces between the two ellipses at points 1 and 2 are much greater than the spaces at 3 and 4, because at 3 and 4 we see the space foreshortened. To make a good drawing of the hollow cube (Fig. 18), it should be first treated as a simple cube, and, if its construction be followed out, it should not be a very difficult matter.

Directly an object is placed wholly in an oblique position fresh difficulties will arise, for there will be no longer upright lines to rely upon. Nevertheless, upright lines can be supplied, and this, together with due notice taken of the positions of various points with other points or lines, should give just as good results. Fig. 19 is the

drawing of a cube in an oblique position. If the obliqueness of the various lines is well considered, and the following methods of comparing points with points or lines

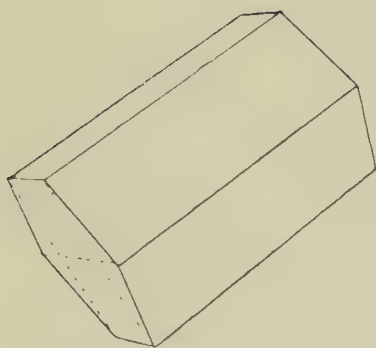


FIG. 20.

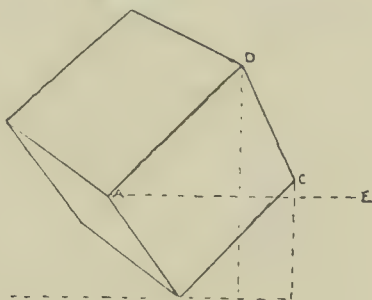


FIG. 19.

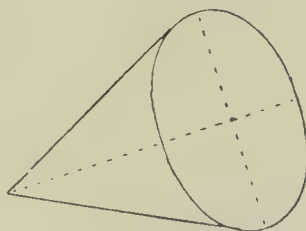


FIG. 21.

carried out, the result will be a fair drawing. Having obtained the direction and length of $B C$, and the direction of $B A$, the point A may be fixed by noticing what its level is with regard to point C , as suggested by dotted line. Line $A D$ slightly converges towards $B C$, and the point D is over the

centre of line B C, and so on until the solid is completed. If the hexagon is next tried, as in Fig. 20, in the same manner, by the use of horizontal or vertical lines, the difficulties of obliqueness may be overcome.

In the foreshortened view of a circular object, when in an oblique position, the drawing should be constructed upon exactly the same principles as when standing uprightly upon one of its circular faces, with the exception that, should one end be nearer to the eye than the other, the one ellipse will decrease in its major axis, that is, it will look wholly smaller. When uprightly placed, it was copied by first drawing the axis of solid, then the upright and parallel sides, then the axes of elliptical ends.

When in any other position, it will be better to attempt it as follows:—The straight sides will be no longer parallel, but will converge as in Fig. 22. These lines

having been drawn making their proper angles with horizontal lines, the axis of the solid should then be placed midway between them and upon this axis, the axes of elliptical ends should be placed at right angles to it, and the figure completed. It should be remembered that, although the solid has been altered from the upright position, it has not been knocked out of shape, and, if the axes of the elliptical ends are at right angles with the axis of the solid in one position, they will be so in another, and this is shown in Figs. 21 and 22. In Fig. 23 an incorrect drawing has been made, showing the fallacy of using an upright axis to the ellipse. If the page be turned so that the centre lines of the solids in Figs. 22 and 23 are upright to the student, it will be noticed that Fig. 22 looks correct, while Fig. 23 is distorted, the elliptical ends not being at right angles with the axis of

the solid. In Fig. 14 attention was called to the depth of the lower ellipse being apparently greater than the upper. In Fig. 22 it will be observed, that the ellipse at the more distant end is proportionately deeper, that is to say, has a comparatively longer minor axis than that of the nearer end.

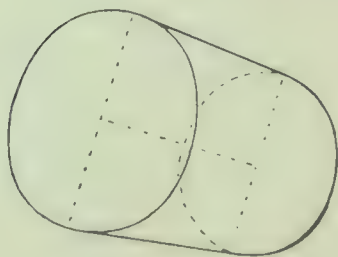


FIG. 22.

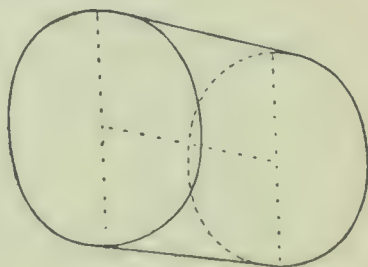
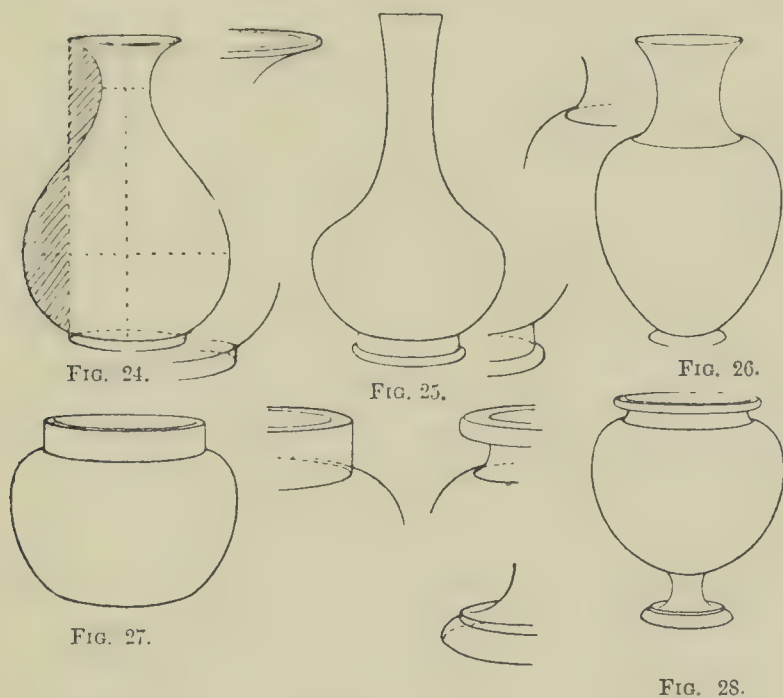


FIG. 23.

We now come to vase forms, and Figs. 24, 25, 26, 27, 28 give those in most general use. Vase forms should be looked upon and treated as elaborate forms of cylinders, because if they are drawn upon the same constructive principles as have been suggested for the cylinder, it will simplify matters. The vase has for its side

lines, one or more curved lines, instead of one straight line, as in the cylinder. The best way to draw it will evidently be to get the ellipses of the base and lip of the vase,



and then the whole attention can be given to make the side lines of the proper shapes. This shape may be tested by holding the pencil vertically in place of the dotted line in Fig. 24, and noticing where it cuts the

curved side line and the shapes of the spaces between the side line and the pencil. The real difficulty in drawing a vase lies in the realization of it. The likeness of it must have been considered. First notice what proportion the foot of the vase bears to the lip, and which is greater. Then compare the foot and lip with the whole depth of vase, and, above all, notice at what height the widest and narrowest parts of the shape occur. Details have been given of the more difficult parts of each vase to show the student that the secret of getting as much as one sees of the foot and lip of a vase to look right depends upon the following out of the ellipses, and noticing how the rounding of one form runs into the next. This will be more clear if reference is made to sketches in Fig. 29, which is the top of the vase, as Fig. 27, but drawn in three positions. The sketches are to show the

relative positions of the line of the vase body in relation to the ellipse and short upright line of the neck.

In drawing a vase placed down upon its side, there are two good ways of attempting

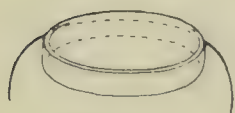


FIG. 29.

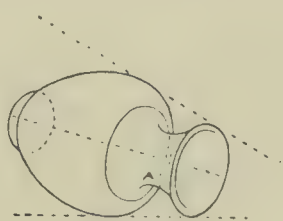


FIG. 30.



FIG. 31.

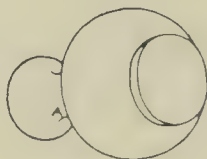


FIG. 32.

it. The first is by judging the angle of the axis of the vase, and making the drawing upon it. But the second is the better method, because it practically embodies the first. Obtain a line which connects the two

parts of the vase which rest upon the board, as in Fig. 30, shown by the lower dotted line ; then get a line which would connect the two opposite points, as shown by the upper dotted line, and having midway found the axis of the base, this axis can be tested by a horizontal line, and the vase drawn upon it. By this means we get at the angle of the whole vase. Figs. 31 and 32 are to show the contour or profile line of the vase blending into the roundness of the vase, and that this may be expressed by allowing the line to die out gradually.

Having shown the readiest methods for intelligently drawing single objects, we must now turn our attention to drawing a group, as shown in Fig. 33. The difficulty will rest in making one object relatively right, as regards form, size, and position, with those which surround it.

Always begin a group by drawing that

object which appears most important, and this will generally be the nearest, as the vase in Fig. 33, and remember that the drawing-board upon which the group stands should be drawn last. If, having drawn

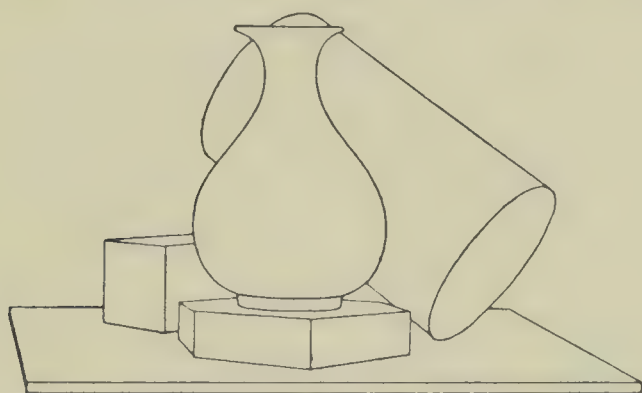


FIG. 33.

the vase as in Fig. 33, notice is taken as to how the lines of the other objects cut into or pass behind the lines of the vase, it will greatly help to get the right proportions. The level of the bases of the various objects should be carefully attended to, or they will not rest properly upon the board.

The great principle which will help the

student to make an intelligent drawing of a group of models is to see that the construction is well understood, and the writer has from experience found that the usual mistakes to be found in drawings from model are caused by lack of this principle. Any line has direction and two ends to it, and if students would only treat these facts separately, they would soon educate the eye to see correctly and quickly.

In the next chapter it will be shown how the learning to draw these simple forms of solids, if well understood, will lead to and be an indispensable help in drawing more elaborate things, such as ornament in relief and foliage.

CHAPTER III.

ADVANCED MODEL DRAWING.

THUS far the object has been to teach the best method of drawing the geometric solids and vase forms, and the same method should be used in attempting to draw the more elaborate objects which surround us. It should be remembered, that the more details and difficulties they possess, the more necessary it will be to first consider them in their simplest forms. It is possible to reduce any elaborated object to a simple form, and as an example of this, by referring to Fig. 34, the few lines will be found to give all the proportions and build of a

chair—the details, thicknesses, etc. having been all ignored for the present, and the whole thing reduced to single lines.

The advantages of this simple expression,

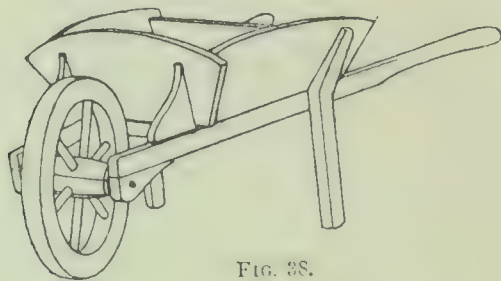


FIG. 38.



FIG. 34.

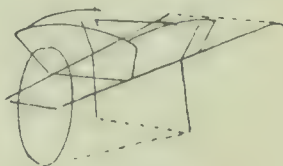


FIG. 38A.

as stated in the chapter on Freehand, are that proportions are fixed, and each part occupies its proper place with regard to the whole.

In the previous paper, when simple solids and vase forms were considered, they were

divided into three classes : those consisting of straight lines, those of straight and curved lines, and those of curved lines. Examples of more elaborate objects are here taken in the same order, those consisting

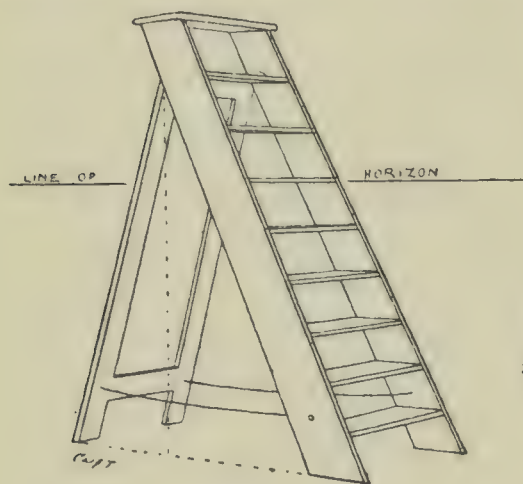


FIG. 35.

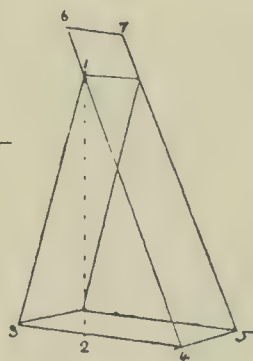


FIG. 35A.

of straight lines being the steps and easel, as in Figs. 35 and 36.

In Fig. 35A a simplified form of the steps is given, in which the pose and proportion are expressed by single lines only. In looking at a real pair of steps, it should be noticed that, if a vertical line be erected

from the ground passing through the point where the steps are hinged, as dotted line 1, 2 in Fig. 35A, there is less space between points 3 and 2 than between points 2 and 4, thereby fixing the fact, that the centre of gravity of the steps is over point 2. If these two spaces were the same, there would be a tendency for the steps to come back upon any one ascending them.

It is always well in drawing any object in the round, to place a horizontal line in the same position in the drawing as the horizontal line, or line of horizon, occupies with regard to the student, which is, of course, exactly on a level with the eye. This line is shown in Fig. 35, and is of great service in keeping in the student's mind the fact that all horizontal lines below the eye ascend, and above the eye descend, and will enable the master to make a better judgment as to the correct-

ness of the drawing. Having carefully considered and drawn the lines 3-4, 4-5, 4-6, at their right obliqueness, and produced the simplified drawing of the steps, as in Fig. 35A, the details, such as thicknesses and widths, may be added. A very common mistake in drawing objects is representing them of too light a build; one frequently sees drawings of chairs, steps, etc. which are unstable.

The easel, as Fig. 36, has been chosen because, in addition to the difficulties arising from the obliqueness of lines caused by its standing open, there is the obliqueness caused by the two laths (A B, Fig. 36) becoming closer together at the top. As the centre lath, if continued to the ground, would be in a line with the supporting lath at the back, it will be better to draw the line A B, Fig. 36A, at its correct angle, and from its centre take the line C D, test-

ing it by means of comparison with A D. When these points are properly decided upon they will be the starting-points for the four laths forming the easel.

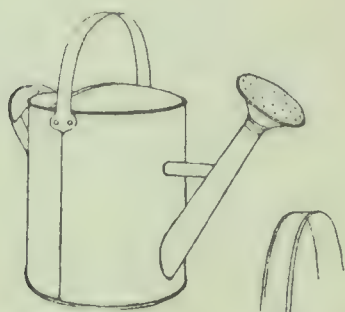


FIG. 37.



FIG. 37B.

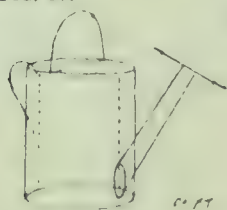


FIG. 37A.

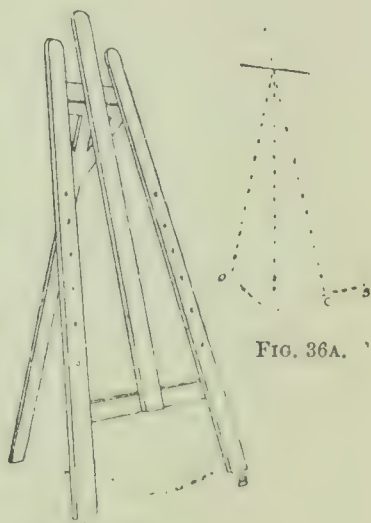


FIG. 36A.

FIG. 36.

As objects consisting of straight and curved lines, three have been chosen: a watering-can (Fig. 37), a wheelbarrow (Fig. 38), and an umbrella (Fig. 39).

The body of the watering-can is the drawing of a cylinder. The facts to depict

are, that the handle at the back of the can is directly behind the spout, and that the semicircular handle over the top is attached to the body at two points midway between the back handle and the spout. These facts are noted in sketch Fig. 37A, by the three dotted lines. The ellipse formed by the rose should be constructed upon a major axis at right angles with the spout. In drawing the semicircular handle, care should be taken that the edges follow properly, as shown in Fig. 37B. The wheelbarrow, Fig. 38, especially depends upon reducing it to its simple form: all the lines to be found in it will appear either oblique or curved. The first lines to draw are those representing the two handles, for upon these everything else depends as a matter of actual construction. The dotted lines, as in Fig. 38A, will be of use in testing the correctness of others.

The simple form of the umbrella (Fig. 39) is given in Fig. 39A. The axis of the whole umbrella is, of course, the stick, therefore the major axis of the ellipse formed by the points of the ribs will be

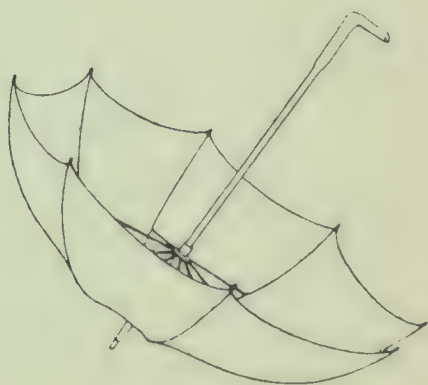


FIG. 39.



FIG. 39A.

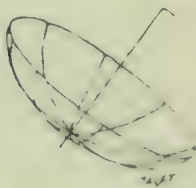


FIG. 39B.

at right angles with the stick. In this ellipse each rib-point should be found, and the ribs then completely drawn as in Fig. 39B. The correctness of the details, such

as the subtle curves formed by the stretching of the silk over the ribs, will be by this method ensured.

As examples of objects consisting of curved lines, Figs. 40 and 41 are given, of

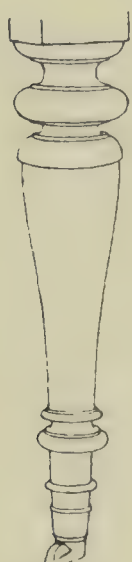


FIG. 40.



FIG. 40B.

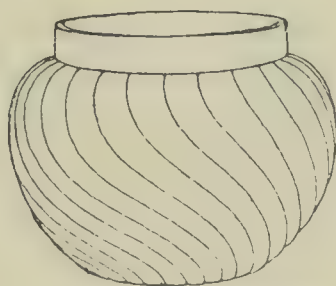


FIG. 41.

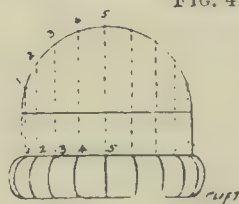


FIG. 41A.

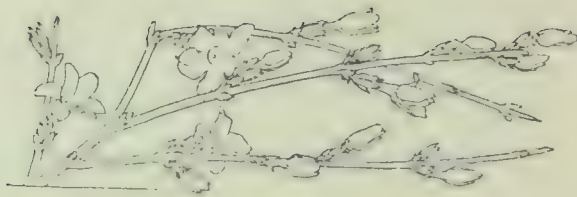
a piano-leg and a vase. The simple form of the piano-leg is given in Fig. 40B. The details are a series of hollow or round mouldings, their connections appearing as ellipses of which only the near sides are

visible. It is necessary to draw the ellipses completely for the reasons previously explained, by means of Fig. 29, and now given in Fig. 40A.

The vase form in Fig. 41 has been given in its simple form. The fluting upon the body is doubly curved and is twisted to the right. When equal divisions are marked upon a circular body, the nearer they appear to the contour or profile of that body the narrower they will seem, but this diminution of width must always be gradual. To understand this better Fig. 41A should be considered, where the setting out of equal divisions has been made upon a half-plan of a simple fluted moulding, and then projected upon the elevation beneath. It should also be noted, that the centre division between the flutes is upright because it is opposite the eye, and that the nearer the fluting becomes to the contour the more it

will be shaped like such contour. This will apply to any pattern placed upon a round object.

If the student will give a little intelligent thought to the individual characteristics of each object he wishes to draw before attempting it, that is to say, if he sees the general drift of the foregoing remarks, the power of drawing quickly and correctly will soon be acquired.



CHAPTER IV.

DRAWING FROM NATURAL FOLIAGE.

IN freehand drawing it was pointed out how necessary it was to first draw the leading line or lines contained in the copy. In drawing from Nature this principle is still most essential, because it at once expresses the growth and construction of the plant or leaf. Fig. 42, a stem of laurel, has its growth expressed by the general lines in Fig. 42A. Each leaf is here expressed by its midrib, and the position and length of each midrib has been decided upon by help of the dotted lines—in fact, the difficult lines have been deduced from the simple ones.

When this skeleton of the plant has been decided upon, the forms of outlines of leaves should be added. One thing to which great



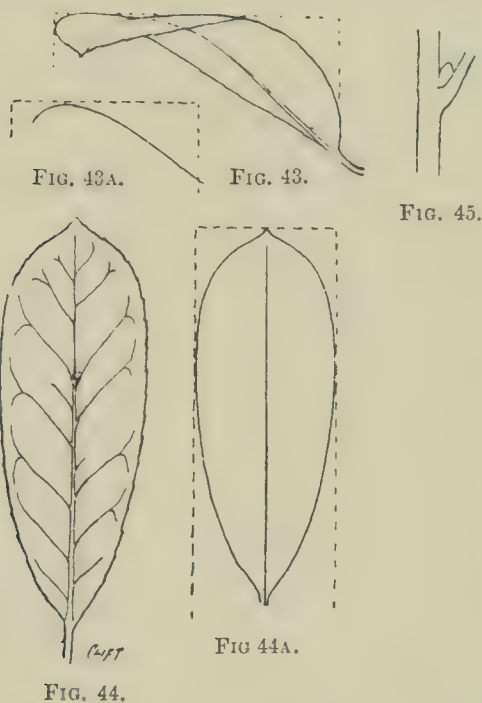
FIG. 42.

FIG. 42A.

attention should be paid is the attachment of the leaf-stalk to the stem, as shown in Fig. 45. This is often done in a very slipshod way, whereas study will show that each plant has its characteristic attachment. It will be

found that Nature has strengthened the leaf-stalk just at the point where strength is most needed, which is at its junction with the stem, and that where the leaf is thin and flexible, it encircles or clasps the stem for additional support, as in the grasses and rushes. All these matters, if a portrait of the plant is required, must be taken heed of, and, as a matter of design, form the chief material. If reference be made to Fig. 43, the foreshortened view of a laurel leaf, it will be noticed that both sides of the leaf are visible, and that part of the midrib is hidden by the turned-over upper surface of the leaf. This midrib should always be drawn completely, and not merely as much of it as we see, in order that its continuity may be maintained, as shown by the dotted line, and the same may be said of its far edge, which is also only partly visible. In Fig. 43A the pose of the leaf is expressed

by the midrib, and Fig. 44 is given to show the veining, which is a great characteristic of leaves. A drawing of a rose-leaf is given in Fig. 46, and surrounding it is a



dotted line. All compound leaves—*i. e.* leaves composed of smaller leaves or leaflets—should be reduced to their simplest forms, and in the case of a leaf in a more difficult position, such as Fig. 47, it is

made easier by the method shown in Fig. 47A.

A study of structural botany is an essential companion to drawing from Nature, and beyond the fact that the one makes the

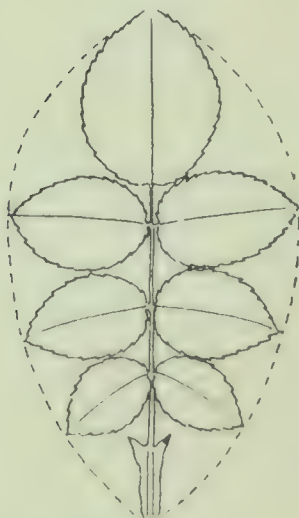


FIG. 46.

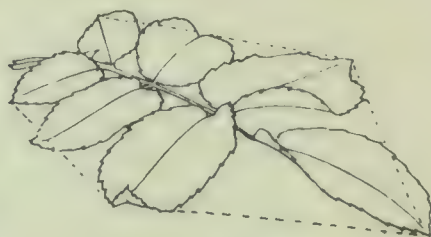


FIG. 47.

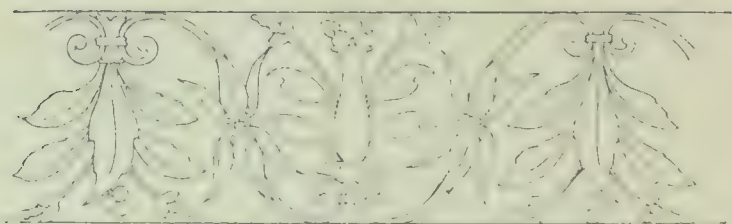


FIG. 47A.

other so much more interesting, it will fix in the minds of the students the individualities of each plant which is studied. This from a designer's point of view is an important matter. In lining-in drawings from Nature, it will be found best to express

the nearest leaf by the darkest line, and the farthest leaf by the lightest line ; but on no account should the relief of the plant be attempted by means of thickening one edge of a leaf and not the other. Veins, which are very often discernible by a difference of colour only, should always be expressed by a lighter line than the edges of leaves, thereby avoiding the cut-up appearance so often found in drawings from Nature. Let the student try one leaf with heavy veins and another with light, and the result will tell him which is the most artistic. I have given as head and tail-pieces to this chapter two drawings from foliage—the former being a spray of yellow jasmine, and the latter a Christmas rose.





CHAPTER V.

OUTLINE DRAWING OF ORNAMENT FROM CASTS IN LOW RELIEF.

THE ornament found upon casts in low relief is generally much more elaborate than any ordinary freehand copy. The examples generally chosen are of historic ornament, and the value of study from such examples is, that we shall be copying good ornament, and thereby shall be examining its underlying principles. Such examples, however, are often indistinct in some of the details, such as the divisions and points of the leaves, and this arises from the action of time and weather upon the originals from which the casts are

taken. It will be necessary, therefore, to pay the closest attention to these forms, and to give them all the thought possible in order to draw them intelligently, for in some of the details we may be called upon to make good defects.

A great help in doing this will be the comparison of such forms with other and similar ones which remain distinct, and from the fact that the principles of plant growth most certainly influenced the designing of the ornament, a knowledge of these will teach us what the indistinct part was probably like.

Low relief ornament will generally be the filling of a given space or panel, and will be in harmony with the lines forming this space. The facts which make ornament good are, that certain ornamental principles are brought to bear upon the arrangement of the elements used. In Fig. 48 I have

taken as an example a portion of one of the pilasters from the tomb of Louis XI. It is shown in progressive stages, similar to

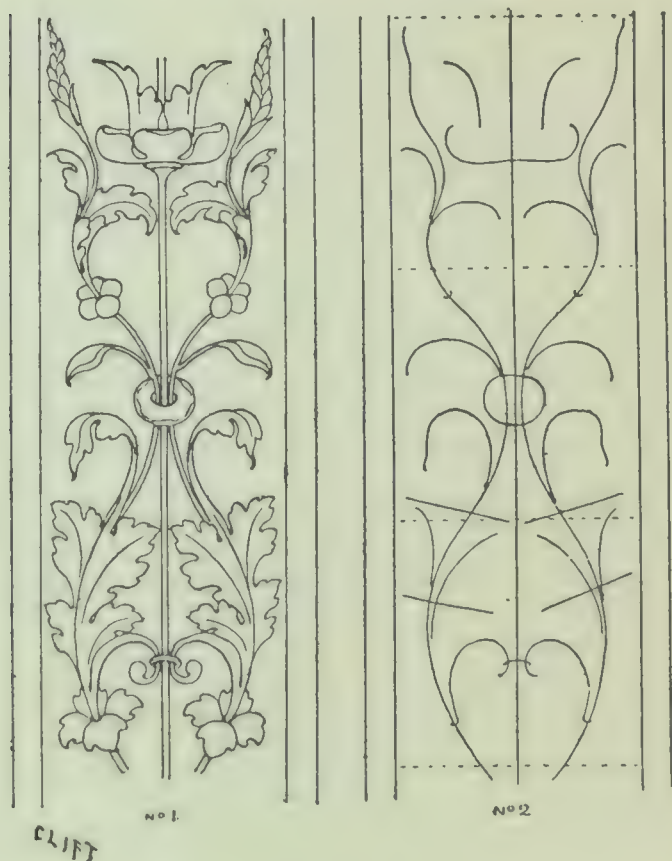


FIG. 48.

the freehand copy Fig. 3; and the method of copying a cast should be exactly as there described. Looking at Fig. 48 analytically,

we find that its distribution is good. By this I mean that the masses are distributed in such a manner that they are not in



FIG. 48.

any part crowded or spare. The straight central stem is in harmony with the sides of the panel, giving strength to the whole. The idea of unity is maintained by the

sinuous side stems, which connect and bind together the various masses as shown in No. 2. The grace of the details which clothe the main lines, is due to the way in which radiation takes place from these lines, while the serrations or divisions of the details give us variety.

The method used in making the copy should be from the first constructive. In No. 2 the general proportion has been decided upon, each form has been expressed by a single line; while No. 3 gives the proportion of parts and the blocking-in of details. No. 4 has been purposely left unfinished, that the construction may be shown. Here it is necessary to point out, that not only must the masses of the various forms be noticed, but also the spaces between them.

As was advised in freehand drawing, the copy should be made larger or smaller than

the cast, and here is a method of getting the general proportions without making any



FIG. 49.

measurements. In Fig. 48, No. 2, there are four horizontal dotted lines, and the distances between these lines are equal to

the width of the panel—in other words, the panel has been divided into three exact squares. Having decided upon the depth which our copy shall be, by drawing the



FIG. 50.

vertical centre line, if this be divided into three equal parts, each part must be equal to the width of the panel in our drawing. By this means we are able to ensure the correct proportions of the panel, and, by

noticing where these dotted lines or squares would divide the ornament, we can in a like manner fit in the ornament in our drawing.

A drawing of the nest of leaves at the

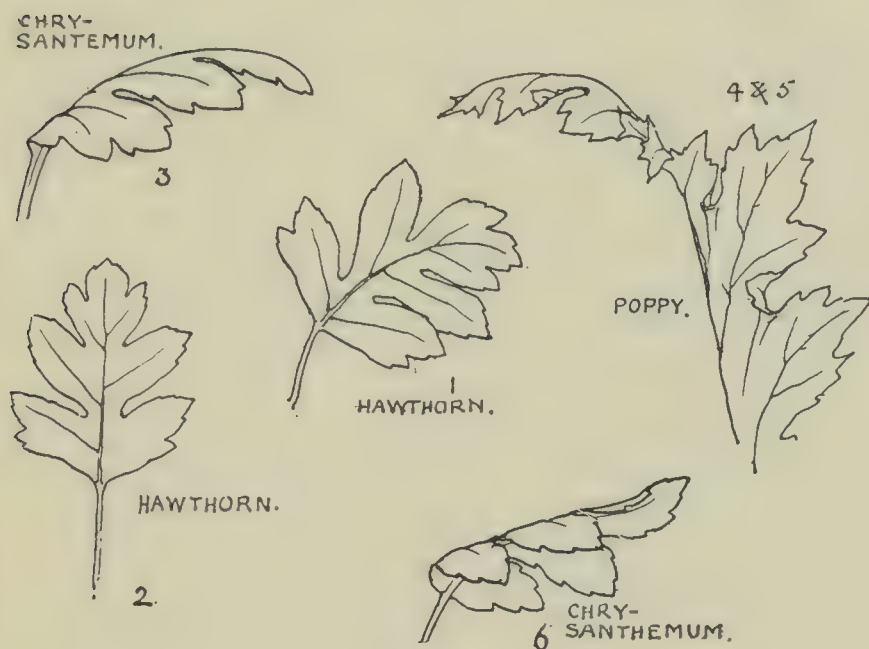


FIG. 51.

base of the Madeline Scroll is shown in Fig. 49, with the construction lines left. In this example the radiation is very noticeable, and this radiation springs from the base of each midrib.

The lining-in of a drawing from a low relief cast should be carried out as was recommended in freehand drawing. If it is desired to express the relief, this will



FIG. 52.

be best done by using the strongest line in that part where the relief is greatest.

Fig. 50 contains some leaf forms taken from low relief ornament, and in Fig. 51

there are drawings of natural leaves, which are correspondingly numbered. These should be compared with the forms in Fig. 50, and it will be evident that although

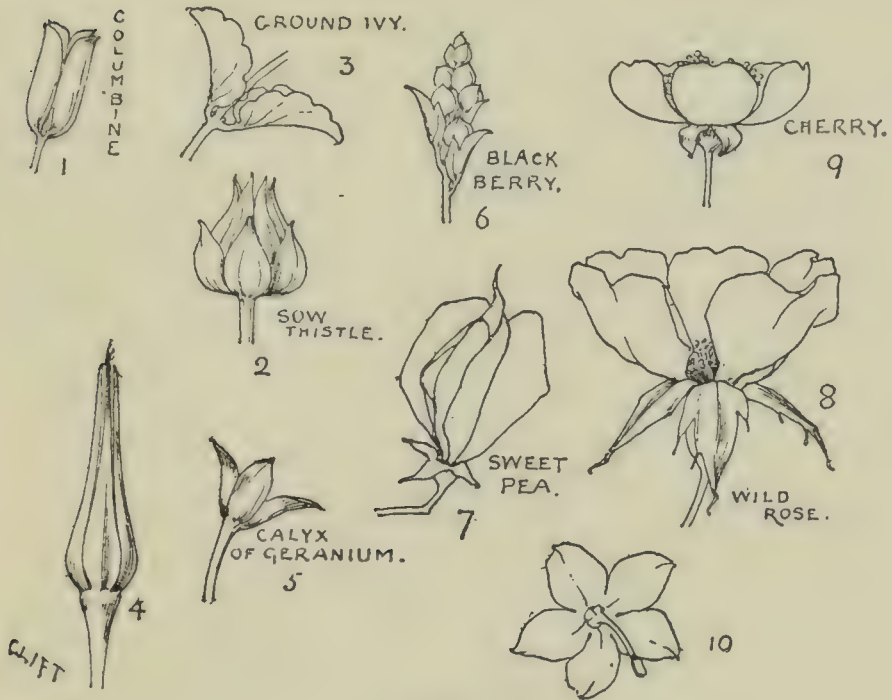


FIG. 53.

the ornamental leaves are unlike the natural ones, yet the same principles of plant growth are common to both. The Hawthorne leaf, No. 1, Fig. 51, being curved, the divisions

are become closed on the inside and widened on the outside ; and it will be noticed that



FIG. 54.

this principle governs the serration of the leaf No. 1, Fig. 50. The turning over of the poppy leaf in Nos. 4 and 5, Fig. 51, has been used

in an ornamental manner in Nos. 4 and 5, Fig. 50. In Fig. 52 other details are given, and in Fig. 53 natural forms containing similar principles. The base of a broad-

LEAF EDGES.

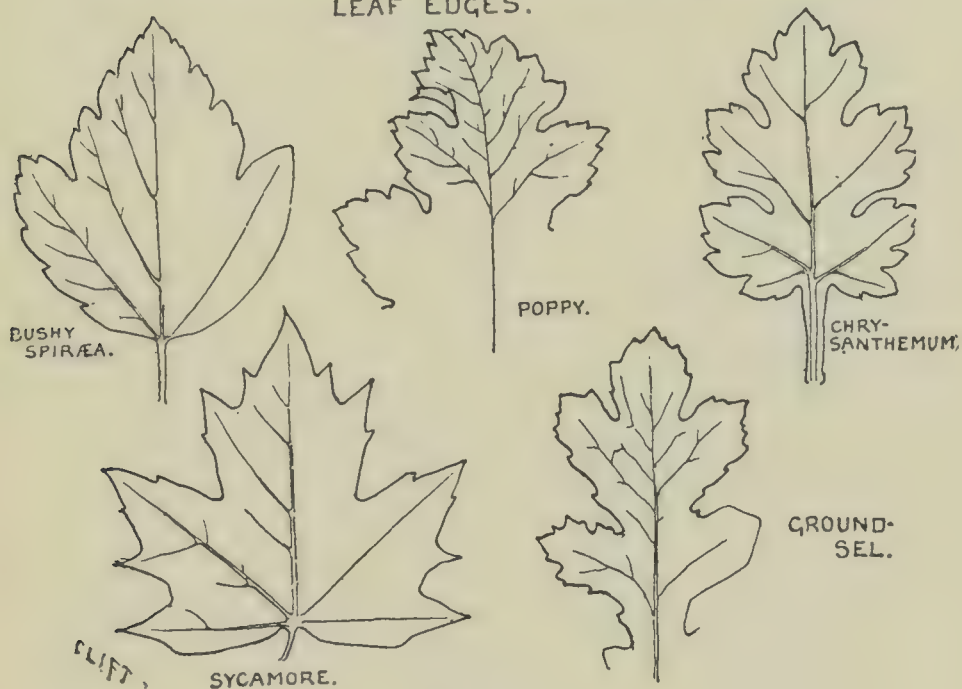


FIG. 55.

leaved poppy will be found drawn in Fig. 54, its principles of growth being similar to those used in the acanthus, Fig. 49.

The manner in which leaf edges are divided or enriched is a very important

matter in ornament. Some examples of natural leaves are given in Fig. 55, to show the difference between the angularity of the two lower ones, as compared with the three

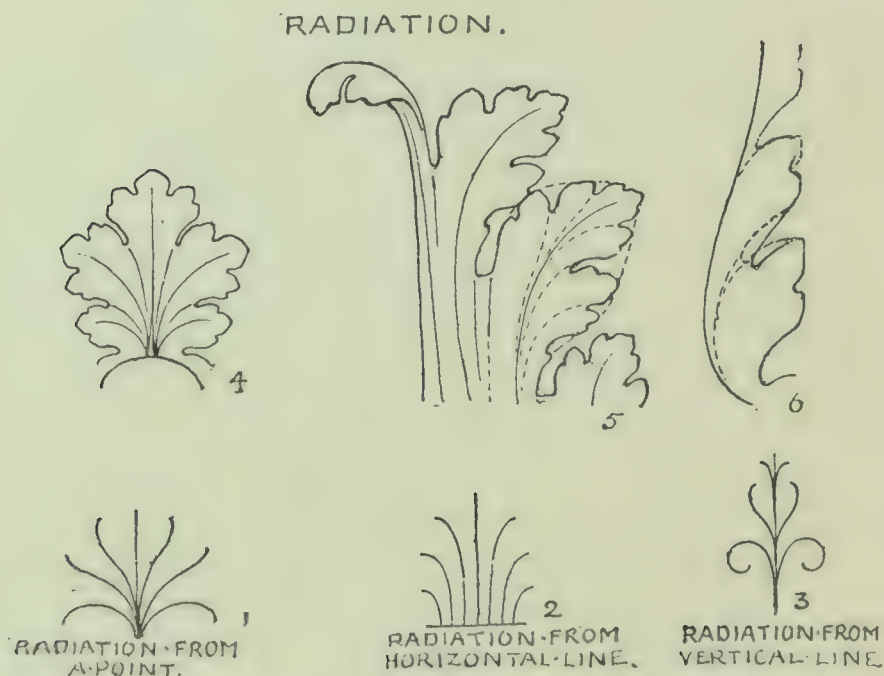


FIG. 56.

upper ones. The enrichment of the edges of acanthus forms varies quite as much in different periods of that ornament as do the natural leaves here given. The various

forms of radiation as applied to the edges of acanthus are given in Fig. 56.

As head and tail-pieces to this chapter I have chosen two examples which chiefly depend upon the proper distribution of the smaller parts or masses.



CHAPTER VI.

ELEMENTARY SHADING.—MODELS.

IN the previous chapter upon outline drawing, the principle of construction has been very strongly insisted upon, for by this means only can the quickest and most intelligent work be done. When drawing “light and shade,” construction will still need most careful attention, because, in addition to construction of edges, there will be construction of shadows; in other words, the construction of the relief of the object.

When beginning the study of “light and shade,” it will be better to work from white objects; and from the fact of daylight giving less definite shadows than an artificial light,

it will be easier to begin with the latter, bearing in mind that the model must receive one light only.

The materials necessary will be a pencil crayon No. 1, Whatman's medium water-colour paper, which should be strained upon a board, and a piece of soft indiarubber. The object should be placed upon a drawing-board, with a piece of clean, white paper forming a background, taking care that the paper background is in such a light that it will look white and not grey. This is important, because the white paper is used that it may be equivalent as a background to the model in the same way that the paper upon which the student draws is to the object when drawn. Objects having flat surfaces will be best for the beginner, because the general tone of a flat surface is defined by the edge of the surface, whereas the surface of a round object may contain

shadow, high light, and numberless half-tones blending one into the other.

A cube should be the first object attempted. When this has been drawn in outline, together with the outline of its cast shadow upon the board, the side which is in shade and the cast shadow should be expressed by a tone made up of parallel straight lines equal distances apart, and of equal strength, as in Fig. 57, No. 1. The strength of this tone should be kept a little lighter than it looks, as the finishing of the drawing will darken it a little. It should never be lost sight of that the object being copied is white, hence the reason for shading it as delicately as truth will allow. It is better to err on the side of greyness than blackness.

The laying on of a tone in this way may seem tedious to the beginner, and will certainly need a little practice, but the

reason for this method is that heaviness and blackness may be avoided. Whatman's paper is used because it has a beautiful

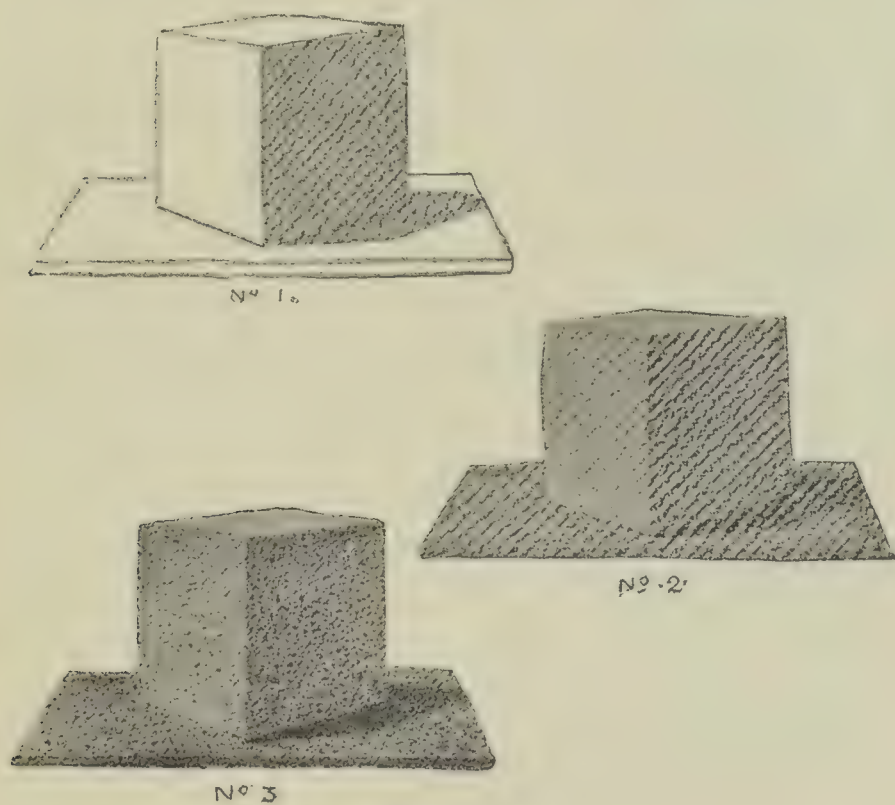


FIG. 57.

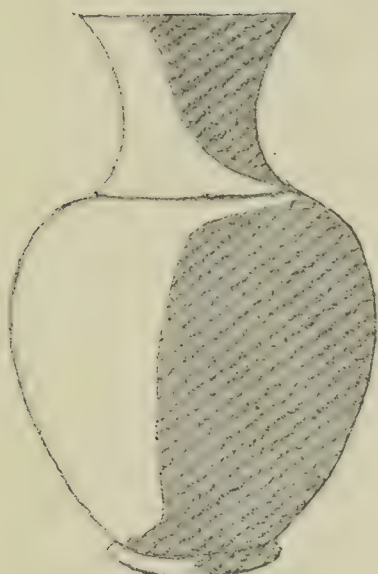
unmechanical grain upon its surface, and if this grain is to be rubbed down, or filled up, why go to the trouble of using it?

The above method of laying on a tone

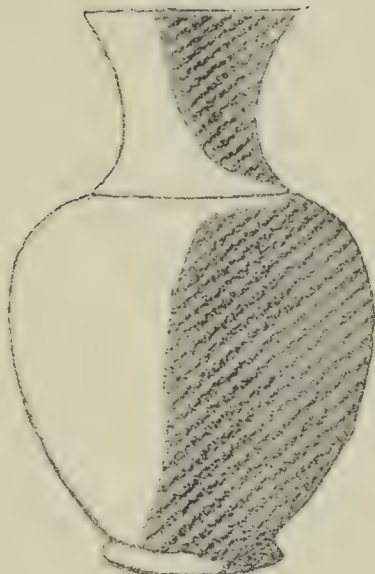
will do away with the probability of loosing the grain, and will produce a grey effect instead of a black one. The student will also be learning three very useful things—to appreciate a flat tone, to make rapidly a series of parallel lines of definite lengths, and to keep a line the same strength throughout its whole length. By comparing the tone of the side of the cube which is in half light with the white background, and with the side in shade, this may next be put on, as in No. 2. The tone of the top surface of the cube, if the background is quite white, will seem of a very faint grey. The side in shade will appear by contrast to increase in strength of tone towards the lighter faces, and the cast shadow upon the board, also the tone of the board, should be expressed in this stage as in No. 2, when the relief of the object should appear quite completely.

The shadow on the board will be darkest where it is nearest to the cube. Constant comparisons should be made of the tone of one surface with another, so that the drawing may progress gradually and correctly. In No. 3 the drawing has been finished. Whatman's paper allows of any extent of finishing, and although it is not well to spend a lot of time in finishing each study, the student is recommended by practice to acquire the power of a very high finish, as it tends to refined perception. It will be observed that in No. 3 the parallel lines have been obliterated by the spaces having been filled in, and the surfaces flattened by filling in the grain with a finer point. When it is necessary to remove crayon from the paper, the rubber should be pressed upon such a place, when it will pick up the crayon from the paper. The slightest rubbing will distribute the crayon instead of removing it.

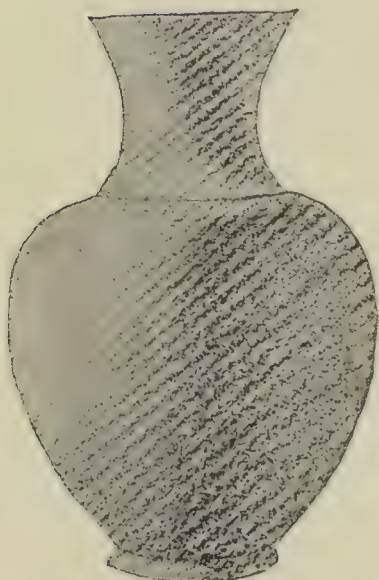
When the student has made studies from such objects as the hexagon, square, and hexagonal pyramids, the first round object attempted should be either the cylinder or cone, after which a vase-form may be tried, as in Fig. 58. Here it has been worked out in four stages. In the first, its "light" has been divided from its "shade." Any piece of shade has, if we look for it, an edge; that is to say, we can draw this shade form by means of a line expressing where the shade ends and the light begins. In No. 3 the half-tones have been added, and this requires more care than any other part of the shading. From the delicacy and the way in which these half-tones blend one into another, the pressure upon the crayon should be very slight, and the effect gradually obtained, because the paler the tone the more obvious will any defect of working be. In No. 4 the drawing has



N^o 1.



N^o 2.



N^o 3.



N^o 4.

FIG. 58.

been finished by filling in all light, uneven parts, and if necessary taking out, with a point of the rubber, any dark parts. Great care should be taken that the outline is quite right before the shading is commenced, for it is bad to have to admit that the start was wrong.

All objects will receive a certain amount of reflected light, and the proper rendering of this reflected light is often missed. The comparative value of such light is difficult to judge, and, as a rule, is seen and rendered by the beginner too vividly. It is possible to so focus the eyes that objects appear indistinctly and of indefinite edges. By looking so at the model, the student will be better able to judge of the value of tones. The farther one can sit away from the board, the better will the drawing of tones be.

When the student has made two or three

studies of single round objects, such as vase-forms, spheres, etc., a group of three or more white objects should be tried. Hitherto white objects only have been considered, because the light and shade upon them, being more definite than in coloured objects, is more easily rendered. The study of tone is preliminary to the study of colour, and, with a knowledge of tone, the rendering of colour is aided. When the student begins to study from objects of different colours, he will, in addition to light and shade, have to deal with the tones peculiar to each colour. For instance, let the student procure two vases similar in every respect, except that one shall be white and the other red. If placed in similar positions as to lighting, the drawing or outline of each shade form will be the same in the white and red vases; but the side of the white vase next to the light will be comparatively

light with that of the red vase. As, however, red as a colour is darker than white, so this tone will pervade the whole of the light and shade in the red vase ; much of the lighter part of the white vase will be nearly white, while the lighter part of the red vase will be far removed from white.

By arranging groups of objects of different tones, colours, and textures, we may make most valuable study therefrom. As an example, let a group be arranged consisting of a plaster vase, a dark glazed vase, and an orange. Here we have to render the white dull mat-surface of the plaster comparatively with the shiny dark surface of the glazed vase, with all its accidental reflected lights, also the uneven rind of the orange.

CASTS.

If the foregoing remarks upon shading from models have been understood, it is

unnecessary to go over practically the same ground. The method of procedure is the same, and by this time the student should



FIG. 59. No. 1.

be able to see tone properly and to render it.

The difficulty lies in the fact that the play of light and shade is more subtle because the relief formed in casts is more varied than in models. In casts the defini-

tion of tones by means of outlines is very necessary, and each stage should be completed as the work goes on. The simpler the example used at first the better, and



FIG. 59. No. 2.

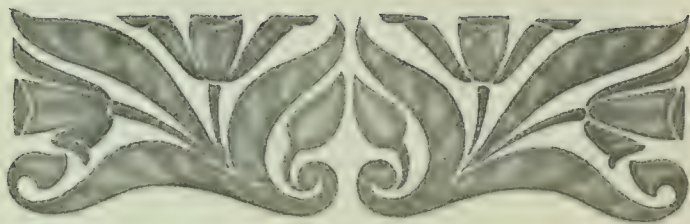
care should be taken that the reflected lights are kept subservient to actual light, or the result will be a loss of breadth of effect. It is best, in fact, to ignore these until the drawing is well advanced. The

great thing to make for is a strong realization of the relief observed in the cast—in other words, an intelligent “lay in.”



FIG. 59. No. 3.

A copy is given in Fig. 59, showing a shaded drawing from the cast in three progressive stages.



CHAPTER VII.

BRUSH WORK.—FLAT TINTING.

WHEN it is desired to express a form by outline only, the proper tool to use is a point, either in the form of a pen, pencil, or crayon. When a form is to be expressed by a tone, a brush should be used, because, if properly employed, it will most readily render a form in tone. But it should be borne in mind, that a brush can be used in such a manner as to make a fine line, or to cover a large space. Where the space to be covered is small, use a small brush, and *vice versâ*. In flat tinting, care should be taken that the brush is

fully charged with colour, and that it is kept fully charged as the work proceeds. In Fig. 60, Nos. 1 and 2 are brush-marks, the first made with a full brush, and having a definite edge, and therefore containing definite drawing; whilst the second is the mark of an exhausted brush, giving an unequal tone, and possessing no definite edge or drawing. The body of a brush should be brought well into play in laying a flat tint, that is, it should be pressed upon the paper with sufficient force to cover the ground in the least number of strokes, thereby saving time and maintaining evenness of tint.

The first practice in using the brush should be in covering simple surfaces with a light tint. The better the paper used, the flatter will the tint be, and it is very much easier to lay a tint upon paper which is strained upon a board than upon paper

merely pinned down, because in the latter case the tint causes the paper to become

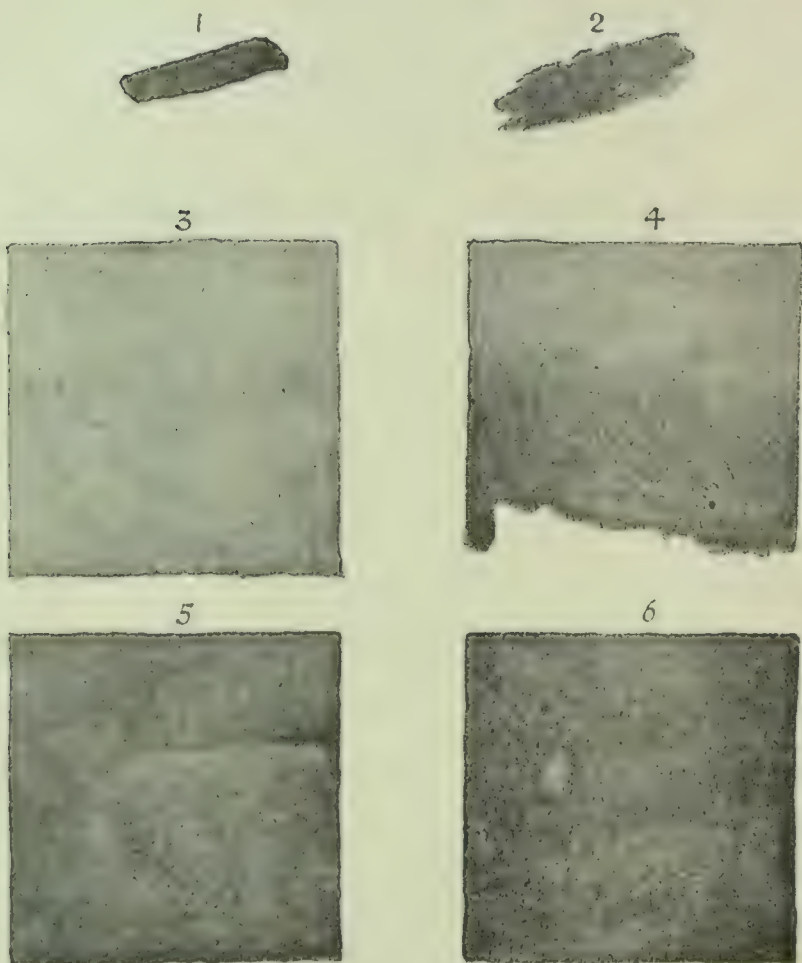


FIG. 60.

uneven. The best brushes to use are round, red sables, for although rather

costly, they are more springy, and with good use should improve. Some colours work more easily than others, and for this reason Roman sepia is recommended. In mixing the tint, it should be remembered, that the darker it is, the more difficult will it be to lay flatly, so that weak tints should be first tried, increasing their strength as the power of laying them is gained.

The materials being ready for work, a series of squares should be drawn of about six-inch sides, and a flat tint laid upon each, increasing the strength of tint as the work goes on, care being taken that enough colour is mixed to cover each square. Colour lies more evenly upon paper which is slightly damp than when quite dry, so that a wash of clean water should be passed all over, and well outside each square, before it is tinted. When the paper has absorbed the water until

its surface is dull, it is ready to receive the tint. In Fig. 60, No. 3, a square is given which has received a perfectly flat tint. The board should be sloped a little towards the student, and the brush, fully charged with colour, should be run along the top edge and a little way down the sides, taking care to keep exactly up to the line, the tint being carried downwards by a series of strokes from side to side. It will be found that the slope of the board will cause the colour which collects at each stroke of the brush to follow the brush in the next stroke; but too much colour must not be allowed to so collect, or it will run down the paper. When the wash is nearing the base of the square, quite enough colour will have collected to supply the brush to the end, when, if too much colour remains, it may be removed with a partly dry brush.

In Fig. 60, No. 4, a drawing is given, showing the colour which has collected, and which is sufficient to carry the tint to the end. If the brush is not kept full of colour, part of the edge may become dry, and this will cause a seam, as shown in the sketch No. 5. When a tint is being laid, and it shows any defect, it should not be touched until quite dry, or a patch will appear, as in No. 6. By mixing a tint dark enough to just equalize this patch with its surroundings, and waiting till the paper is dry before it is applied, it may be mended.

When it is necessary to remove a spot or patch of tone which is darker than its surrounding tone, this may be done, after the tint has become quite dry, by damping the exact part to be lightened, and pressing (not rubbing) it with a piece of clean white linen rag. The pressure

will lift the colour, but rubbing would smear it.

When an intricate space has to be covered with a flat tint, the difficulty will be in keeping one edge of tint wet whilst another is proceeded with, and this will be overcome by working with a well-filled brush. Some of the freehand copies which the student will have done from time to time will furnish good exercises for flat tinting, beginning with the simple ones, such as shown in Fig. 61, No. 1. In No. 2 we get an exercise in which there will be three spaces to attend to, and three edges to keep wet.

A great many people begin to paint pictures without the faintest knowledge of how to lay on a wash of colour, in fact, they attempt to use tools the purposes and possibilities of which they have never taken the trouble to inquire into. Practice

as here recommended would in such cases have prevented much useless action and disappointment.

So far, the practice has been limited to

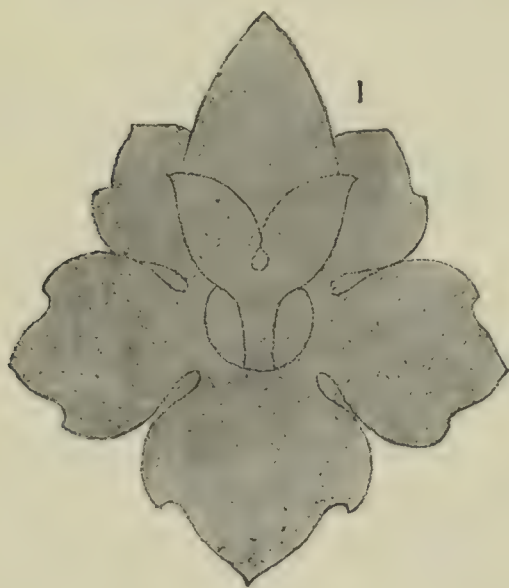


FIG. 61.

the flat tinting of forms already drawn, and the next step should be in entirely expressing forms by flat tints. Simple vase forms, as Fig. 62, No. 1, are good practice, together with the leaf form, No. 2. The white line has been left (in No. 3) between

the washes representing each face of the cube in order that they may be kept quite separate, and may not blend one into the other.

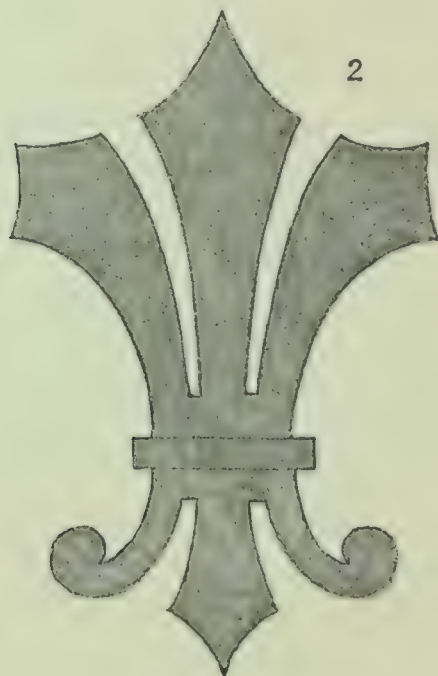


FIG. 61.

The student will also probably have free-hand drawings containing interlacing ornament or forms which cross one another, and these may be covered with tints of different strengths, as in Fig. 63, No. 1. Drawings

from Nature may be tinted in like manner,

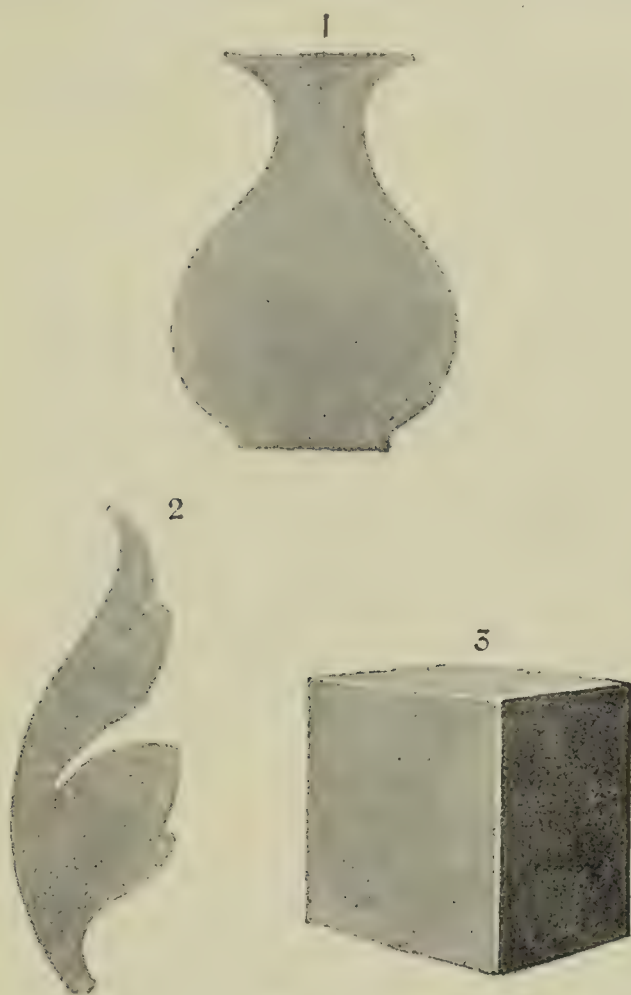


FIG. 62.

using the darker tint to express the under sides of leaves, as in No. 2.

The laying of a flat tint should be done

as quickly as possible, but hurry must always be avoided. All the materials should be at hand, so that no interruption



FIG. 63.

may occur, and care should be taken that sufficient colour is mixed to complete the tint.

BRUSH FORMS.

There are various forms which can be readily made by a single stroke of the brush,

and certain shaped brushes will give certain individual forms. Examples are given in Fig. 64, No. 1, of a few forms made by a round and a flat brush, but practice is



FIG. 63.

necessary for the student to see what great possibilities arise from this method. Each form should consist of a single stroke, and not be the result of merely flat washes. The beauty of brush forms is that they are very

direct results of thought, and that they contain variety of tone, because the brush will have more weight of colour when it leaves the form than when it begins it.



FIG. 64.

From the fact of a brush being pliable or springy, if different pressures be brought to bear during a stroke, the form made will be graduated in width—in fact, can contain the narrowest and broadest mark which the

brush will make, and the exercises given in No. 1 are examples of this. The forms given in No. 2 are composed of two or more strokes of the brush joined or connected; while in No. 3 we get brush forms used separately, but which are ornamentally arranged, the last being expressed in two



FIG. 64.

strengths of tint. No. 4 is a design for a border, consisting of brush forms of two tints.

The forms mentioned above are purely conventional or inventive. The forms which surround us in Nature can, however, be perfectly rendered by means of brush forms, and the great masters of this method

a designer's point of view is invaluable. From the necessary simplicity with which Nature has to be rendered by brush forms, it enables one to grasp the great truths or individualities of an object without being overcome by the details.

In making designs where the finished work will be visible because of its being light against dark, or dark against light, the readiest and most satisfactory method will always be direct brush work, because from the beginning it is studied in mass, and the all-important matter of spaces between forms can be fully considered con-



FIG. 65.

currently with such forms. This is borne out by the fact, that a design may look quite right in outline, but when it is separated from its background by a tone, will require reconsideration. In No. 2 a design based upon the iris has been rendered in brush forms.

A great deal of useful study may also be obtained by the rendering of ornament by brush forms. Two examples are given from casts in low relief. The first is a leaf from the nest of the Madeleine Scroll (Fig. 66), in which the principle of radiation is most prominent, and has been the fact aimed at in the exercise in brush forms. The second (Fig. 67) is a portion of a pilaster, and here the aim has been to render the various masses in their simplest forms.

When it is required for decorative purposes, to express light ornament upon a darker ground, Chinese white or body

colour (*i. e.* non-transparent colour) should be used in place of the sepia upon a tinted paper.



FIG. 66.

The benefit to be gained from the direct use of the brush lies in the fact that thought must come before action. One must be mentally sure of a form before attempting its expression. The continual use of

outline may become monotonous and very often indirect. In teaching I have found that judicious change of subject and means of expression are most important matters,



FIG. 67.

and the use of the brush in the elementary stages of art training makes learning and teaching more interesting.

As a head-piece to this chapter a portion of a border is given, in which tones of various depths have been used one over the other, or, as it is termed, tones superimposed.



CHAPTER VIII.

BLACKBOARD DRAWING.

THE practice of teaching by means of examples drawn upon a blackboard offers great advantages. To the teacher it means the saving of time, and to the student a quick and, at the same time, sure way of gaining power. Where a large class is concerned, the custom of working from small copies means a very considerable outlay, and very often are either badly drawn or badly chosen. I have found, particularly with very elementary students, that in giving each student a separate copy, it is tedious work having to explain in each

case the best method of work, whereas by making them work collectively from the blackboard example, methods and principles can be explained quickly. It also enables a teacher to limit the practice of his class to any certain stage of work he may choose, and to give such copies as will bear upon one another. Blackboard copies should contain only as much work as may be finished in a single lesson, and this will make each lesson of separate interest. A good workman may be recognized by the way in which he sets about his work. The old custom of giving a student very elaborate freehand copies to draw from, and which sometimes took many hours to complete, was very bad, because its tendency was to tire the interest of the student. It has been pointed out in previous chapters, that the first stages of a drawing are those in which the great facts and therefore the great

difficulties of each copy are attempted and overcome, when the details will take care of themselves. By means of examples set on the blackboard the student will have many opportunities of seeing how the master works out a copy, and should thereby gain the power of readily summing up an example, and of attacking it in a direct way. To those teachers who have not tried this method of working I should strongly recommend it, and it is surprising, if the examples are well chosen, what great progress a class will make. The student, being unable to take direct measurements of proportions from the blackboard, will have to rely mainly upon the judgments of brain and eye ; and this power is of the greatest value.

There are two good ways in which to give examples upon the blackboard. The first is for the teacher to work out a copy in view of the whole class, taking it line by

line, the students following him. This is quite a constructive method, the copy being built up gradually. If, after each stage, viz. general proportions, proportions of parts, blocking-in, and addition of details, the master passes round the class, seeing that his method is quite understood and carried out, any weakness of method, principle, or perception on the part of a student will be evident and can be remedied. An example of a blackboard copy in its various stages is given in Fig. 68.

With regard to the size of drawing copied from the blackboard, it should be remembered that to any one capable of working largely, it is comparatively easy to reduce the scale of their work, while to a student who has been allowed to work in a small and feeble way, the enlargement of the scale of work will often mean an enlargement of ignorance or want of power. A good size to work to

is to make a drawing fairly fill a quarter-imperial sheet, *i. e.* fifteen inches by ten

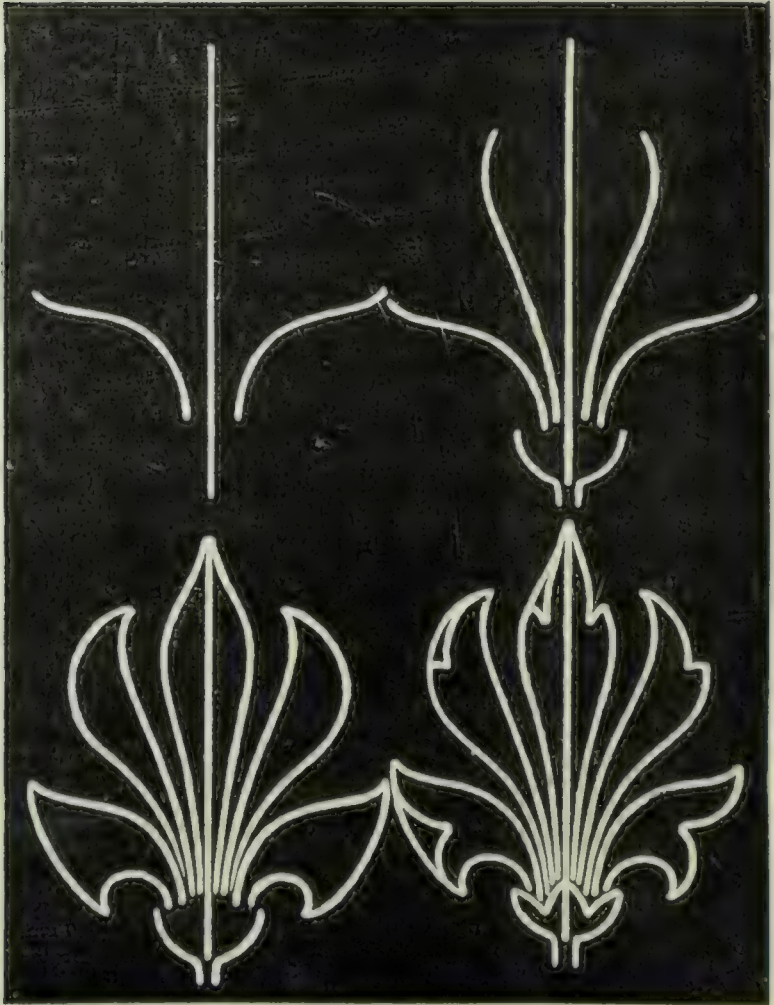


FIG. 58.

inches. By the term “fairly fill,” it is meant that where the example has its

greatest dimension this should be placed within the greater dimension of the paper to be "fairly filled." One often comes across cases where an example having its height greater than its width is so placed that the height occupies the narrow way of the paper.

When the class has grasped the method of building up a copy, examples should be given upon the blackboard which have been completed previous to the meeting of the class, in which case, each student will have to rely upon what constructive knowledge he has acquired from the previous series of lessons. The copy will have to be mentally analyzed, and the best way of beginning to work decided upon. In this way, the masters will be able to exactly gauge the powers and weaknesses of each student, and to render help where most needed.

In teaching model drawing, the blackboard is very useful in explaining general principles of construction. The methods for obtaining the obliqueness of lines, the

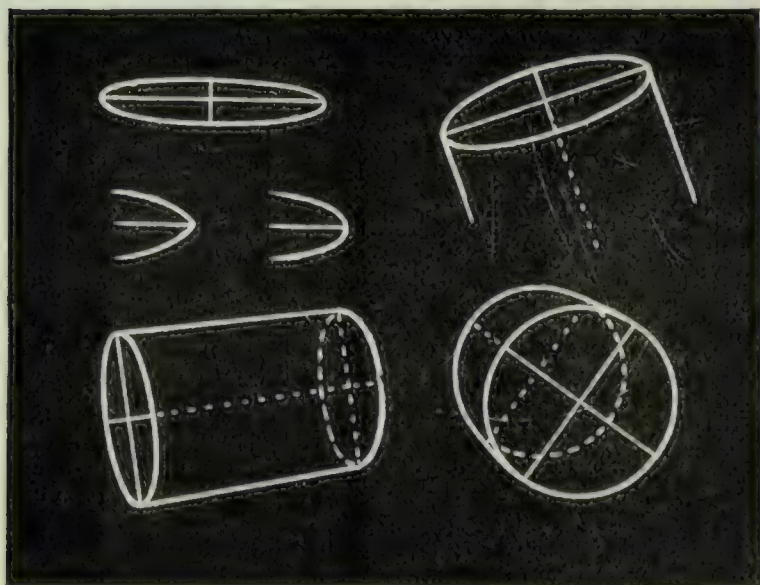


FIG. 69.

qualities of curves, and of explaining such matters as the construction of ellipses and hexagons, may be demonstrated upon the blackboard, and such drawings are of great value to students as reference when drawing

from actual objects. On no account should objects be drawn in foreshortened positions for students to copy from, because, beyond the fact that such drawings can only be



FIG. 70.

right from the view of one student, it is thinking for the student instead of, as it should be, make the student think for himself. I give in Fig. 69 two drawings from the blackboard, which will be found useful

in explaining the construction of a simple ellipse, and its application to a cylinder, which appears in an oblique position.

In outline drawing from the cast, a great deal may be done upon the blackboard

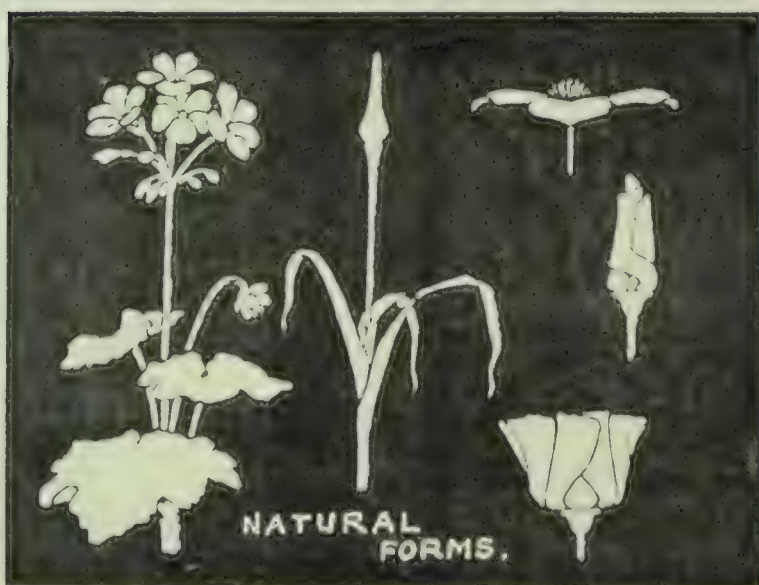


FIG. 71.

in teaching the student to appreciate the distribution of masses, and the rendering of details, for the great tendency is for students to allow details to run away with them, at the expense of proportion and

grace of form. The reduction of forms containing intricate edges to simple quantities, are given in Fig. 70, and alongside them will be found the additional detail drawings.

By using flake white, mixed with a little



FIG. 72.

gum and water, brush forms may be just as readily rendered upon the blackboard as upon paper, and the white forms tell more strongly against the black ground, than black forms upon white paper, and the

white is easily removed from the board with a sponge. Drawings of natural forms as material for design may be expressed in a similar way, and in design lectures, or in explaining ornament, and separating it from its background by different tones, the black-board will be found of readier use than paper. Some simple examples of this are given in Figs. 71 and 72.

The great thing a teacher or a student has to remember is, that the quickest way of imparting or receiving knowledge is by making thought the director of effort. By this means we can make them almost simultaneous, because thought will make effort sure.

THE END.

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